Transactional Analysis And Education – Living with Current Complexity: Contracting, Context and Complexity, and Consciousness, Cognition and Comprehension

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The article contains two items which use initial capital letters to create a 3C; the translation into English has been adjusted to maintain this memory aid.

Some changes have also been made so that significant footnotes are now included within the text or reproduced within an appendix. Some references have also been added.

Abstract
A brief presentation of the OECD (2018) 21st Century Skills framework indicates that there are many possibilities for those involved in training, education, teaching and learning. A three-party contract model is reinterpreted in the light of the current complexities of social, economic, cultural and technological changes, and the way in which these are highlighting attention to borders and ethical aspects, allows us to hypothesise new synergies between various fields of TA application of psychotherapy, counselling, educational and organisational. Although this contribution focuses on research within the educational context, it demonstrates the possible implications for personal learning relationships within the complexity of our time.

Key Words

Introduction
This work is part of a framework of ongoing experimentation and research into how transactional analysis can be introduced into the learning processes and teaching within primary schools. (Fregola, 2016a)

The learning and teaching processes are reinterpreted from a perspective that allows the integration of relational, cognitive, metacognitive and affective dimensions, and assumes that they can become the ‘object’ of the didactic activity, in line with the OECD (2018) (Fregola, 2016b) skills of the 21st century to facilitate the development of self efficacy and autonomy within the social context outside the school, where new approaches to social communication is increasingly in evidence. These approaches can be related to the characteristics of both virtual places (social networks, Internet, video games) and ‘real’ places (where complex communication processes (Prensky, 2012) are influenced by multicultural (Cominicini, 2012) and intergenerational (Baschiera, De Luigi, Luppi, 2014) dynamics. The consequences concern each of us as we are immersed in processes of innovation and change that invite us to frequently revisit the personal repertoires of knowledge, skills, cultural references, attitudes (Fregola, 2017a).

The work is part of the research that places TA as a reference theory that integrates with other theories of education (Epifanio Erdas, 1979) and of the psychology of learning (Bocci, De Angeli, Fregola, Olmetti and Zona, 2016), in order to re-interpret the relationship that each person has with their own learning (Fregola, 2012). In this context, one of the central themes concerns the perspective of the contractual agreement of TA with its particular
characteristics (Berne, 1971; English, 1975), which provides elements that are proving interesting in the ongoing experiments and in the training activities aimed at future primary school teachers and in-service teacher training, as well as the training of other figures interested in educational processes, training and learning at school.

The work is divided into two parts: the first concerns the three Cs, contract, complexity, and context of the educational field, and this triad constitutes the integrating background of the work.

The second part concerns a model of an educational contract that is being gradually developed on the basis of a research-action hypothesis (Fregola, 2017b), which intends to structure the possible interactions between the second three Cs: awareness, understanding, knowledge [to maintain the C - hereafter referred to as consciousness, cognition and comprehension] within the contractual perspective and forms the basis of the model. The latter is in the process of being formalised as the heuristic phase of research has just been completed and the experimental phase in progress has already provided interesting elements of orientation and in-depth analysis. The theme of change acts as a bridge between the first and the second part. It is considered relevant to share with the reader the fact that Berne, in many books, introduces the meanings of words he uses and will use. Some words, in fact, can acquire different meanings and determine perceptions, report on experiences, elicit reactions, different responses in terms of analysis and also of understanding the written text or the orality of the sentence. In this work the term change has the specific meaning of referring to the fact that whenever there is an innovation that comes from the outside in a system (Von Bertalanffy, 1968), or that we intend to generate or introduce inside, the change represents the transformation of innovation into competent behaviours that find observable application, within the professional performance that is put in place in everyday life (Fregola, 2003).

Innovation and Change

Those who attended school until the 1960s will remember that there was a hole in the wooden desks [for the inkwell]. People of all ages, at all times, will react differently to this information. Those who arrived at school equipped with pens made of plastic or other materials may have talked of the holes at home and may then have discovered that those who attended school before them had not just the information but also the experience of using the holes [for the ink for their pens]. Grandparents may therefore have recalled the moment of the introduction of the ballpoint pen, fountain pen, or maybe the typewriter at home or at work or in the school. The need to write, and the writing function, are basically unchanged but the way we do it, and the tools and related materials, on the other hand, constitute an element of change that can be related directly or indirectly to the knowledge, skills and abilities necessary to write. The consequences in the internal world relating to learning are manifold because they can concern not only knowledge and know-how but the culture and its manifestations that impact on that know-how.

In the film Policarpo ufficiale di scrittura [Policarpo Writing Official by Mario Soldati (1959), there is evidence of how the object of the typewriter did in fact constitute an innovation that brought about change.

The protagonist, the actor Renato Rascel, is the Policarpo character for whom the director has built an intricate intertwining between private and working life, so the viewer can immerse themselves in a generational dynamic marked by customs, family models, and social classes characterising the behaviours of men, women, children and the elderly of that time.

Policarpo tries in every way to resist innovation, to protect his profession, perhaps his power and his identity and, between the lines, one can grasp the attempt to maintain a definition of boundaries between status relative to the role it plays in public administration and family and inter-family ties. It is the future husband of his daughter, who works in the industry where the typewriter is produced, which persuades Policarpo to experiment with innovation. The motivation for change arises when Policarpo discovers the existence of the copy paper which allowed the production of more than one copy of a document at the same time. When the day of the presentation of the typewriter arrives, Policarpo exhibits himself with an admirable performance in front of the government representative. He demonstrates his professional evolution to bystanders compared to being a writing officer despite the fact that in order to perform the function, the same function, the necessary skills marked the transition to a new profession: from being a calligrapher to being a typist. He received the praise of his colleagues and the government representative but aroused unease and surprise in his superiors who were also forced, despite themselves, to give him a promotion. The possibility of getting involved is guided by an economy principle. Despite the result achieved for Policarpo, it was still a matter of giving up a repertoire of acquired and reassuring skills that had gradually evolved over time until it became a set of expert skills that highlighted his personality, his interests and his own way of representing himself in that role (Schmid, 2008). It is precisely the awareness that innovation was irreversible to trigger the change process. We read in the film the role of intuition that guides an evolutionary adaptation that manifests the
continuing to be recognised as a person and as a professional in his/her ability to become. Policarpo, therefore, decides to learn typing on the basis of a principle of personal economics that can be observed through the scenes in which his passion, skill, rigor and precision are evident in every single action that make his skills and competences manifest, and his talents when he prepares working conditions in the morning by carefully choosing the tools of his job. Finally, there is an economic and organisational dimension that implicitly enters Policarpo's assessments and choices; his perception of the risk that innovation may be a threat to maintaining his job is not evident, but the signal of his motivation for change, as we have seen, comes from the discovery that the second copy can be made by the machine and puts him in the condition to pay attention to the relationship with his own learning in experiencing the contrast between a force that leads back to routine, conservation and persistence and a force that derives from innovation that stimulates or breaks into everyday life with all its consequences of threats and opportunities and moves towards its evolution (Naciti, 2015).

‘Routine’ is here understood as a set of assimilated automatic schemes that are mastered.

The same schemes can come into action under the influence of the Integrating Adult (Tudor, 2016), or under the influence of duty, dictated by the Normative Parent, which induces the Adapted Child to take and hold executive power (Moiso and Novellino, 1982).

To better consider the impact of innovations on customs and lifestyles, we can refer to the advent of the washing machine. In the past, you went to the river and, where there was no river, public wash houses became widespread so that in time they replaced the river. Wash houses became places where there was female work and also became places for small talk, support and reciprocity, solidarity, socialisation and information. People felt part of a community and learned of many facts. The patterns of social communication were loosened and situations were created in which rituals, pastimes, withdrawal and psychological games became part of the structuring of time. From documentation that can be found on the Internet, activities and intimacy are also detectable from the testimonies about how a hard and tiring job became lighter through the exchange of competencies and gossip, and the women making jokes and talking. (Sanders, 2003).

It is this author's opinion that communication in the 'set of washrooms' is very different from communication within the walls of the home. It protects social and private spaces to the point of recognising, in the history of the washhouse, a place in which principles were incubated for female associations and the definition of cultural, civil and political rights. It is known that scientific research and the development of tools and technologies have allowed mass diffusion characterising the industrial revolution. On the one hand, innovation can have economic reasons and on the other hand, diffusion of it went in the direction of improving living conditions in terms of well-being, hygiene conditions, and determining a new social order with important repercussions on lifestyle and relationships. It took a while for the washing machine to become a mass phenomenon. It seems that one of the resistances to change was due to the conviction that the time freed would have been used in inappropriate ways that would have been out of line with the rules and social permits granted to women. The spread of the washing machine, as well as that of other appliances, was also initially conditioned by the high costs so they were not accessible to many, but the resistance due to customs should not be overlooked. It seems that the mass diffusion of washing machines began from an advertising slogan that pointed out that such a machine would allow women more time for their children and husbands. (Asquer, 2007).

**Information, Knowledge and the Knowledge Society**

The two examples of innovation proposed can be reinterpreted as metaphors for a transformative process that has identified and described an epochal generational change. The current historical moment is characterised by ever more frequent innovations and by increasingly complex requests to change in a society which is in constant transformation – the knowledge society.

The metaphor of the knowledge society (Alberici, 2002), can be taken as a descriptive and evocative image of the new human condition that has been, and is being determined, according to the development of information and communication technologies and the network, which has as its structural foundation interconnections between real and virtual, with increasingly significant sequences in the ways of interpersonal communication, identity, intimacy and imagination (Gardner and Davis, 2014), starting from multi-ethnic and intercultural interactions (Schachner, 2016).

Our research has shown that awareness of being immersed in the knowledge society can refer to understanding the important distinction between information and knowledge itself. To master the information it may be sufficient that you have learned schemes that allow you to search for information, identify it, classify it, select it according to its characteristics, purposes and objectives expected for its use in the context in which it operates and above all
to make sense of it. The generations all synchronously present have experienced and developed different approaches in interacting with the functions of information and knowledge. The scholar Umberto Zona (2015), citing Gardner and Davis (2014) describes how the digital era has given birth to generations shaped by technology and over an extremely short period of time compared to biological and cultural generations. The author presents a survey on how the concept of generation has evolved, thanks to which it can be deduced that another generation is taking shape today which can take over within a few years or even a few months. Until the 1950s, the generations defined themselves in reference to common cultural and political experiences and had a much longer duration, sometimes partially overlapping each other. "The Silent generation (the one "silenced" by television broadcasting), for example, travelled a good stretch of road in the 1950s, together with the shouted aesthetic of the Beat generation; just as the mythical sixties and seventies functioned as aggregators of very different youth cultures (from those belonging to the hippy movement to those protagonists of metropolitan social movements). The so-called Generation X groups together all those born between 1960 and 1980 and was however marked by historical events of great impact such as the Vietnam War, the Falklands War, the East-West opposition, the explosion of rock music. The next Generation Y, including those born between 1980 and 2000, had a scenario of the fall of the Berlin Wall, globalisation, the expansion of the internet. Therefore, more hybrid generations put together the cultural aspect with the more strictly registerd one" (Zona, 2015, pp. 68).

According to Gardner and Davis (2014), rather than with time and duration, the current one, the app generation, should be distinguished based on how identity, intimacy and imagination are transformed. Online communities and social networks that are accessible through apps are in fact reformulating:

- the principle of identity from the point of view of belonging and frequenting the places where virtual and real relationships can be managed (Lévy, 1997);
- the principle of intimacy in relation to a reformulation of the boundaries between what is public and what is private (Berne, 1971; Waring and Reddon, 1983)
- the principle of imagination in relation to the possibility of representing a future that cannot be based on stable models that can allow you to make predictions with the risk, among other things, of creating app-dependencies (Zona, 2015)

Knowledge, therefore, implies a finalised and meaningful processing of personal, social information, as Berne (1986) wrote, with all three ego states.

In order for information to travel correctly, with timeliness and quality, and to become available where and when it is appropriate or necessary, guidance tools and models are required. Navigating information to generate knowledge is a contract with families and other subsystems involved in the educational process, that a school can promote as its institutional reason for being.

The transformative processes taking place bring together new interactions between people, objects, and places (Bauman, 2011; Prensky, 2009, 2010, 2012; Schwab, 2016; Fiorini, 2017). Etiquette, technicalities and group character of the Cultural Parent (Drego, 1983) can jeopardise or hinder, as well as facilitate, giving structure and design to plans for change. Those who are preparing to start processes for transforming innovation into change, by choice or in spite of themselves, may find they are calling into question the identity of their roles, their own system of skills, the methods of communication they adopt, and the patterns of relationships that are 'spreading' in exchanges mediated by the virtual world. Because of these assumptions, one of the hypotheses that guide our work is that teaching, training and learning are in close relationship with the schemes that determine how knowledge is transformed in an individual way into information, as well as that knowledge itself may remain unchanged, or may change partially, or may be 'reinvented'.

'Relationship with one's own learning' means here awareness, understanding and knowledge of both declarative and procedural knowledge (Fregola, 2016a, p.145). The question we have asked ourselves in research is: what relationship does each of us have with our learning in the knowledge society?

An investigation with the teachers: what is the title of this photo?

In early December 2014, Gary Pikovskv tweeted the photo in Figure 1, taken at the Rijksmuseum in Amsterdam, with the caption "No comment necessary"

You, the reader, are asked to "listen" to your own moods and reactions that develop while observing the image and to develop a title that describes the photo.

This question was the basis of the survey conducted with around 150 teachers, who were asked to write their individual titles. These titles were then collected and classified into categories which were chosen to represent symbolic meanings or the way in which similar meanings could be inferred. The classifications of the titles can be seen in Figure 2.

After sharing the framework of categories and checking that people were recognising their own proposals within it, a lesson was run using the 'Flipped Classroom' process (Cecchinato and Papa, 2016).
The flipped classroom is an educational technique that can be applied intentionally within a didactic contract between the class and the teacher. (Bergaman and Sams, 2016; Longo, 2016; Rivoltella, 2013).

This inverted class can be structured in three stages: Briefing, Conducting, Debriefing, with the initial briefing conducted whilst still at the school.

The Flipped Classroom Briefing

We share:
- The aims - the purposes
- The learning objectives - the expected results in terms of knowledge and competence
- The skills that are being pursued
- The sequence at the museum and the rules for consulting a smartphone or tablet

Conducting

When in front of the work of art, the students are expected to note their reactions, feelings, moods, emotions and thoughts. They consider any previous knowledge about the museum, the specific artist, or any connections with the historical period of reference.

They then search for information on their smartphone or tablet, selecting their own criteria for searching and the sources they draw from and looking for different options. They can consult with each other without asking any questions of the teacher.

Debriefing

Whilst still in front of the picture, as shown in Figure 3, and respecting the expectation of silence within the museum, the students exhibit the results of their research. In addition to sharing their feelings, moods, emotions, thoughts and points of view, they share the analysis of their sources and discuss (in a pedagogical sense) what is information and what is knowledge, and what is personal and social knowledge that they have been building. (Bocci, De Angeli, Fregola, Olmetti and Zona, 2016).

Back to the Teachers and their Titles

The teachers were asked to confirm or change the titles that each had assigned before they had been told about the flipped classroom technique.

In essence, a knowledge contract had been entered into relating to the flipped class (Ballanti and Fontana, 1981), so the process had stimulated understanding and awareness of some of the 'internal' phenomena initiated by the stimulation of seeing the image, and activated within different ego states. This makes it possible to work on the contamination of the Adult caused by prejudice, and more generally by the system of parental beliefs and the beliefs held by the Adapted Child which come into effect when a threat is perceived. In some cases, however, the power of the Free Child demonstrates curiosity, wonder and the Adult, with the guidance of the Normative Parent about the Nurturing Parent to maintain boundaries between old and new, and the support of commitment and attention, keep the critical sense active and start the engines of learning.
After the request for confirmation or change of title, the following results occurred, as shown in Figure 4:

- about 40% changed it and some categories not previously contemplated were added;
- 35% confirmed their title;
- 25% confirmed their title within categories that can be defined as coming from an area of contamination of Parent and/or Child on Adult.

3C: Consciousness, Cognition and Comprehension

Ferdinando Montuschi (1994) comments on the specific characteristics of the contract for the educational field of application. It presents particular problems that concern not only the intervention but also its location, which is the context, structure and relationships within which the intervention takes place. This leads to identification of two specific dimensions of the contract; the social dimension and the professional dimension (Montuschi, 1994, p.16).

In our research we add the focus on learning in complexity (Morin, 2001), which led to revisiting the issue of the personal relationship with one’s own learning. The contract process began with an initial agreement with the participants to ‘write the title of the photo’.

It was followed by a contract that can be defined as Berrian, (Berne, 1966; Steiner, 1974) centred on learning, taking into account the Bernian criteria of a contract and developed on three dimensions that manifest themselves as interdependent: consciousness [Berne’s awareness], cognition and comprehension. It requires re-interpretation of the didactic structure and its phases to recover the psychological level of the contract. The technique of the flipped classroom can be considered a scaffolding for the teaching process. The value for learning derives from managing the group in a more deliberate, intentional way that takes into account:

- mutual consensus on the context, the aims, the objectives that characterise the photo at the museum in Amsterdam, to be understood as documentation of the pedagogical-educational process;
- valid remuneration, observable from the fact that the subjects involved in the relationship, each with their own role (trainer-teacher), contribute to the educational intervention with a valid contribution. In this case the user and the structures involved are connected by a direct or multi-party contract (English, 1975);
- competence, here understood as a repertoire of ability accompanied by the willingness to take into consideration the issue of transforming innovation into change: the traditional lesson is integrated with the flipped class;
- legal objective, which opens up interesting evaluations of the ethical issue of change and the dilemmas on what is a constraint, to be understood as a change that in spite of ourselves must be managed, and possibilities, to be understood as a set of processes that allow active, personal and respectful participation of the various systems of reference to the transformations taking place (Ceruti, 2009).

The evidence, which the research has highlighted, concerns the transformation, or confirmation, of one’s point of view on young people, technology and some etiquette related to today’s world. There are two sources that allow you to find these elements:

- the analysis of each title assigned to the photo before knowledge of the topic on the Flipped Class and after the reworking that was requested of the photo title;
- the sharing of intercepted internal dialogues, moods, feelings, emotions, thoughts that this operation entailed allowed us to work on understanding and awareness and this allowed us to distinguish the phenomena related to new learning, those relating to the reworking of the above.

It was useful to reflect together with the participants in the research on how new levels of knowledge, understanding the difference between innovation and change and the development of awareness can constitute a mix that arises when referring to phenomena that affect learning within the complexity of the knowledge society.

This supported the hypothesis that a contract that is structured taking into account the 3Cs of consciousness, cognition and comprehension allows us to investigate and enhance the specificities of the educational field. In particular, this is more evident
when working with the intention of conceiving, designing and creating learning environments in which the TA contribution can support a contract focused on the most suitable conditions that can facilitate the transformation of innovation into change (Fregola, 2012). Figure 5 shows the model.

The 3C contract model articulates the interaction between the way of developing one or the other, or their possible combinations, according to sequences that can generate virtuous circles (see Figure 6) here and now, of the value of innovation and the deliberate decision of promoting and determining self-efficacy and autonomy with less influence of learning schemes that somehow hinder the process of awareness, in the decision to start a process of involvement, motivation, relational and emotional commitment to participation in transformative processes of turning innovation into change (Fregola, 2016b, 2017b).

![Figure 4: Confirmed and Changed Categories](image)

**Figure 4: Confirmed and Changed Categories**

**New - changed**

![Generation 2.0](image)

**Figure 5: Model for the Educational Contract within the complexity of the Knowledge Society**

![Figure 6: Virtuous Circles developed by the 3Cs](image)
Final Considerations

At the end of this work, we share some considerations which may have an evolutionary value rather than as conclusions. The results detailed above mark a point of arrival, in that they define the structure of the 3C contract model and provide the first definitions. The experiments about its applicability are still in progress. At the same time, connections, doubts and a focus are opened that relate to the increasing complexity of personal relationship with learning. We propose that boundaries are needed between what happens as a result of deliberate and intentional actions arising from conscious choices, and what happens dynamically between those and the results of experimental action (Levi Strauss, 1967).

The interactions between the learning relationship, consolidated knowledge and innovation knowledge, have allowed us to formulate hypotheses about the connections that happen in everyday life within interpersonal relationships, in the interaction between roles, in the belonging of roles to organisations which are involved in a changing macro-social context, and how these are in close relationship with the phenomena of the world inside the person. TA allows us to make these more explicit and to study some of the hidden influences so that we may improve learning processes and personal relationships within learning from the perspective of the freedom of learning. Whilst changes are still in progress, the need for contextualisation and understanding of the evolution of the external context and its impact on information and knowledge has become evident, as well as the need to take care of the consequences in the internal world of people.

Berne (1947/1957) wrote of physis as the underpinning of the values that define the philosophy of TA. He defined it as “the growth force of nature, which makes organisms evolve into higher forms...” (p. 404). Mauro Ceruti (2014, pp. 89), refers to the rediscovery of physis whilst writing about The End of Omniscience, quoting the aphorism of Cornelius Castoriadi: “Physis is what has in itself the principle and origin of creation of shapes “.

Each generation admires the work with the aims, interests, motivations, curiosities, postures and with a composure that guides and is guided by the cultural parent of the era to which it belongs (see Figure 7). This approach leads us to hypothesise areas of synergy between the various fields. For example, it has been found in the laboratory phases envisaged by the research path that the contamination of prejudice against the Adult can have different levels in terms of maintaining or changing the title of the picture This supported the hypothesis that if the belief is rooted to the point of threatening the frame of reference (Schiff, 1981), the internal phenomena that manifest themselves in an observable way in each field, using the toolbox of the transactional analyst of ego states, transactions, rules of communication, drivers and discounts, allow us to observe to what extent the possibility of reading the reality of the here and now can be related directly with pedagogical-didactic action or requires a contract that requires a decontamination process which, in turn, requires a specific field focus. In some cases the need for decontamination has shifted the focus onto the practitioner's activity within an empowerment or problem-solving contract, whereas in other cases it has shifted to psychotherapy where the contamination is rooted in the deepest processes of beliefs, observable through discounting or within pastimes and games.

These cases need different processes because, not only is the possibility of expressing the best of oneself jeopardised, but the protection of oneself in one's role as teacher, of the image one has of one's role, of students, families or of the school organisation, is threatened. Finally, there is the added value of the organisational field of TA in the transformative moments of school and the training systems in which one is immersed and which are also closely related to adult learning processes (Kolb and Fry, 1975; Mezirow, 2003).

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References


Figure 7: Other Generations Viewing the Rembrandt Painting

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