



**Interculturally effective people within organizational wide agility and science fiction as testing ground. Star Trek Voyager as case study.**

**Goreti Margarida dos Santos Araújo**

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**INSTITUTO SUPERIOR DE CONTABILIDADE E ADMINISTRAÇÃO DO PORTO  
INSTITUTO POLITÉCNICO DO PORTO**



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**Master Degree Dissertation**  
**presented to Instituto Superior de Contabilidade e Administração do Porto to**  
**obtain the Master degree in Intercultural Studies for Business under the guidance**  
**of Sara Cerqueira Pascoal, PhD**

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**Resumo:**

O trabalho que se apresenta procura estabelecer relação entre o que é preconizado como uma Pessoa interculturalmente eficaz e como isso pode ser potenciado no âmbito dos negócios. Para esse fim, o Capítulo I introduz termos relacionados com eficácia intercultural e expressa as razões por que há uma necessidade crescente de pessoas cientes da eficácia intercultural. Em seguida, no Capítulo II, algumas ferramentas relacionadas com agilidade e seus respectivos valores utilizados nos negócios são apresentados, e que são *Agile*, *Sociocracy*, *Beyond Budgeting* e *Open Space*, bem como uma teoria sincrética - BOSSA - que juntos podem apoiar a prestação de Pessoas interculturalmente eficazes num ambiente de negócios. Para terminar, no Capítulo III a Ficção Científica é trazida à colação como possível campo de teste para a eficácia da agilidade em potenciar a interculturalidade nos negócios. Aqui a *Star Trek Voyager* é apresentada como um possível ambiente movido pela agilidade.

**Palavras-chave:** Intercultural; Eficácia; Agilidade; Ficção Científica

**Abstract:**

The work presented tries to establish a connection between what is professed as an Interculturally Effective Person and how it can be strengthened within business. To that end, Chapter I introduces terms related to intercultural effectiveness and expresses the reasons why there is a growing need for people to be aware of intercultural effectiveness. Then, in Chapter II, a few agility related frameworks and their respective values used in business are presented, which are *Agile*, *Sociocracy*, *Beyond Budgeting* and *Open Space*, as well as a syncretic theory - BOSSA - that together may support the provision for Interculturally Effective People in a business environment. To end, in Chapter III Science Fiction is brought to the fore as possible testing ground for the effectiveness of agility in potentiating interculturality in business. Here *Star Trek Voyager* is presented as a possible agility driven environment.

**Key words:** Intercultural; Effectiveness; Agility; Science Fiction

## **Dedication**

To Vitor and my parents, my favorite.

## **Acknowledgements**

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You all teach me that kindness is very different from weakness.

## **List of Abbreviations**

BOSSA - Beyond Budgeting, Open Space, Sociocracy, Agile

IC - Intercultural Competence

IEP - Intercultural(ly) Effective Person/People

SF - Science Fiction

STVOY - Star Trek Voyager

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# Introduction

## Objectives

During the course of the Master's degree on Intercultural Studies for Business, we were given tools to understand what is interculturality, what can be perceived as an Interculturally Effective Person (IEP) and a role and importance of that role within business.

To that end, in this work we will try to systematize the conclusions we came to, through our readings and reflections, regarding what constitutes an IEP, what it means to bring this into an organization and suggest a framework we believe to be in harmony with the current world of organizations and the experimental need inherent to becoming IEP.

We then looked onto an organization we believe to be a good example of IEP in action, choosing a fictional example that is *Star Trek Voyager* (STVOY). To understand better the example we also dove into what is science fiction, as the example is a Science Fiction (SF) work.

We hope this effort can be used to bring to real-life examples in organizations the needed connection between IEP and an agile framework, for improved relation within organization and between organizations and what is seen as exterior to them.

Nonetheless, we believe that more significant than the answer we may provide here, the importance lays on the question presented. Based on the theory of Adaptive Action by Eoyang and Holladay (2013), we believe uncertainty is the new certainty, that complexity is intrinsic to human relations, but that many times we seek a simple answer and that the simplest of tools and strategies may find faster solutions.

We trust that individual transformation, in business at least, may come from organizational refocus and team typology rebuilding.

## Methodology

To help us define and redefine our work, as mentioned, we looked onto the work of Eoyang and Holladay (2013) on Adaptive Action and tried to put the concepts in action in building the work and hope this shows in each chapter. We started by asking "What",

that is, what is an Interculturally Effective Person, why do we need this and work that has been done so far in that regard. We suggest an agile environment as solution.

We then move to the “So what”, the second adaptive action question. Here we look deeper into what constitutes agility in an organization and the connection that can be done with being an Interculturally Effective Person. We bring to the fore an example, *Star Trek Voyager*, a work under the Science Fiction genre, to show how Interculturally Effective People working in an agile environment succeed.

For the third adaptive action question, “Now what”, we propose organizations to adopt an agile environment that integrates in its strategy, structure and processes the need for intercultural effectiveness.

#### State of the art

In their study “Human Culture and Science Fiction: A Review of the Literature, 1980-2016”, Menadue and Cheer (2017) look into research literature during that period and show the use of the SF genre in that research. Because of their search the authors conclude that “[t]wo characteristics of the use of science fiction in research became evident in the review: its role as a tool for advocacy and cultural insight and its effectiveness as an aid to learning and teaching”. To our work, the second characteristic is more important, as we will look into the possibility that SF and specifically in the example we will use - *Star Trek Voyager* - go a step further.

We believe our example to be a testing ground for the use of an agile framework in organizations as a way of incorporating properly and rapidly intercultural effectiveness in the strategy, processes and structure of organizations. We find validation for this expectation in the words of the authors (Menadue & Cheer, 2017:13):

Science fiction has been used as a metaphor and as an illustration of human culture by researchers in fields that are not restricted to studies of science fiction literature. As such, there are indicators that science fiction is employed as a lens through which human culture may be viewed to discover new interpretations.

Therefore, the use in the following studies mentioned in the authors’ findings (here reproduced according to the table drawn by the authors but only for the selected entries

and in a reduced manner), we believe, is of relevance to our work, as they set SF as learning tool, medium or as having made an impact on interpretation of reality (Menadue & Cheer, 2017:4-10):

|                   |  |
|-------------------|--|
| Author(s)         | Erren, T.C.; Falaturi P.   |
| Date              | 2009   |
| Title             | “Research Insights and Insides: “Science-in-Fiction” as a Contribution to the Third Culture Concepts”  |
| Focus of research | How science fiction may be an instructional/educational medium addressing Snow’s two-culture issues (synthesis of humanities and science) of 1960 and extension into a “third culture” by Brockman in 1995 |
| Summary           | Science fiction can be used as an educational medium to promote science in two-culture and three-culture environments  |

|                   |   |
|-------------------|---|
| Author(s)         | Hansen, B.  |
| Date              | 2004  |
| Title             | “Medical History for the Masses: How American Comic Books Celebrated Heroes of Medicine in the 1940s”   |
| Focus of research | How comic book “real story” literature with medical heroes affected the perception of medical science and the attractiveness of a medical career to young Americans in the mid-20th century   |
| Summary           | It is very likely that the “true story” medical comics had a significant positive impact on the cultural value and profile of medical advances and medical scientists. That they provided simple but realistic information in an immediately accessible form and reflected the common themes in mass culture of the time. |

|                   |  |
|-------------------|--|
| Author(s)         | Jameson, F.  |
| Date              | 1987   |
| Title             | “Science Fiction as a Spatial Genre: Generic Discontinuities and the Problem of Figuration in Vonda McIntyre’s ‘The Exile Waiting’”                          |
| Focus of research | What science fiction offers which goes beyond the formulas of soap opera and distinguishes it from what might be considered equally banal forms              |
| Summary           | Science fiction adds richness primarily due to the imaginary of space, being less to do with time than with more openly structured and flexible environments |

|                   |   |
|-------------------|---|
| Author(s)         | Kotasek, M.   |
| Date              | 2015  |
| Title             | “Artificial Intelligence in Science Fiction as a Model of the Posthuman Situation of Mankind”   |
| Focus of research | The function of science fiction in shaping ideas about evolution, posthumanism, artificial intelligence, and the processes that define the human mind |
| Summary           | Connections between humans and technology, and fiction written about technology, exist in a hermeneutic relationship                                  |

|           |                              |
|-----------|------------------------------|
| Author(s) | McIntire, E.G.               |
| Date      | 1982                         |
| Title     | “Exploring Alternate Worlds” |

|                   |   |
|-------------------|---|
| Focus of research | To examine how geographers might benefit from examining how science fiction treats notions of space and environment   |
| Summary           | Science fiction provides a way of creating environments and ecologies and modeling human interactions with them that enables us to see our own geographical and environmental issues in a fresh light |

|                   |  |
|-------------------|--|
| Author(s)         | Parrinder, P.  |
| Date              | 2009   |
| Title             | “Robots, Clones and Clockwork Men: The Post-Human Perplex in Early Twentieth- Century Literature and Science”  |
| Focus of research | The distinction between the human and posthuman as portrayed in science fiction and from a historical perspective on the nature of humanity  |
| Summary           | Consideration of the gradually changing historical concepts of what it is to be human informs the current (and complex) posthumanism debate and contrasts the postmodern approach to earlier perspectives. A historical view is invaluable for rationally examining current debates. |

|                   |  |
|-------------------|--|
| Author(s)         | Rabkin, E.S.   |
| Date              | 2004   |
| Title             | “Science Fiction and the Future of Criticism”  |
| Focus of research | The future of criticism lies in making qualitatively more informed, imaginative, judgments that draw on systemic analysis of a vast, technologically mediated set of collective knowledge and experience                   |
| Summary           | Science fiction is a “system” that reflects modes of modern science, and is fundamentally networked and collaborative. It is the most influential cultural system now that technological change “constantly provokes hope, |

|  |   |
|--|---|
|  | fear, guilt, and glory.” Analysis of science fiction texts may provide insights into cultural attitudes and contemporary society. |
|--|---|

|                   |   |
|-------------------|---|
| Author(s)         | Sielke, S.  |
| Date              | 2015  |
| Title             | “Science Studies and Literature”  |
| Focus of research | The link between science studies and the cultural work of literary texts that probe the history of knowledge production |
| Summary           | Defines and positions science studies within the current discussions on science, culture, and literature                |

|                   |  |
|-------------------|--|
| Author(s)         | Strauss, K.  |
| Date              | 2015   |
| Title             | “These Overheating Worlds”   |
| Focus of research | Ecological issues: Opportunities to explore climate change in human geography are opened up by utopian and dystopian representations in science fiction  |
| Summary           | Utopias and dystopias are fundamentally spatial, stories of a better present and archaeology of the present, enabling exploration of alternative political futures and other socioeconomic systems |

## **Chapter I – Growing need for Interculturally Effective People**

In this chapter, we explore the idea of what it is to be an Interculturally Effective Person (IEP), through the perspective of various authors on the matter, from the work *Intercultural Competence: Alternative Approaches for Today's Education*, edited by Fred Dervin and Zehavit Gross (2016).

We then look into the reasons why this is an important matter within organizations.

We end by giving a theoretical definition on core characteristics that have been considered as essential for an IEP, following the work of Vulpe, Kealey, Protheroe and Macdonald (2001).

### 1.1. What is IEP

Our world and our education is based many times on ideas of right and wrong, correct/incorrect as opposites and not necessarily as just different approaches. The interculturally effective person (IEP) has the ability to be competent interculturally. This means that the IEP will need to deal with both what she believes to be right and what she believes to be wrong. The “other(s)” can be easily labelled as wrong but in this case you will always be trying to impose your “right”, therefore incompetent and never effective.

Having to deal, within a changing and challenging context with the “other(s)” puts you in a never-ending process of learning and contributing to the “other(s)” learning from you and about you.

For Dervin and Gross (2016: 2) education has a central role in preparing this new way of seeing the “other(s)” and we believe daily development within any context, and mainly the workspace are central to this shift. We also agree with these authors when they speak of the usual way of seeing only the cultural difference, in a context where we should all be growingly aware of the similarities and common aspects (Dervin & Gross 2016: 3) – we are more alike between us in what we believe, feel, want and see. Contact is now in our everyday life, and the more we perceive the shared and respect the difference, the faster we can catch up with the growing need to work together, win together, achieve together, the more effective interculturally we are, the more effective interculturally we become.

Also, and going back to these authors, we believe Dervin and Gross (2016: 6) capture the true pragmatic way of intercultural competence – not to be given a metaphoric recipe. We believe instead that one should be given metaphoric ingredients and that one should be at each point a turned on metaphorical stove, where they join and are cooked, understanding that each time the result will be different. Sometimes the result will be close to what would be expected and many times off-point. But that there is nothing wrong per se about that, except if you throw all away and learn nothing on how you cooked them ineffectively.

As these authors state, “IC is composed of contradictions, instabilities and discontinuities” (Dervin & Gross, 2016: 6) and the fact that we are in contact should have at its basis the admission that we see “other(s)” through our ideology and political values. Contact and negotiation have to always be at the center, and having a simple approach helps see things as simple and common and helps also to see difference and diversity more clearly and as less dangerous to us. Finally, an idea that speaks volumes to this thesis, is that “discussions on and acceptance of failure should be included in ‘models’ of IC” (Dervin & Gross, 2016: 6).

As authors Egekvist, Lyngdorf , Du and Shi (2016: 32), we also believe in culture as a product of individuals that are not one thing, but multiple and in dialogue at all times. This dialogue affects both the individual and, therefore, the culture itself. To be an interculturally effective person one would need then to see those with which one is negotiating mutual understanding as individuals and not as a product of a culture set in stone.

The authors call to attention from their reading of Holliday’s *Understanding intercultural communication: Negotiating a grammar of culture* that “the society in which we were brought up have an impact on us as human beings and are resources on which we draw” (2013; from Egekvist et al., 2016: 33). Even so, the closer and faster a person directs itself to a mind-set of facing the individual, without falling into the belief that the impact is deeper or the drawing is bigger than it is actually showing, the closer the person will be to the highest effectiveness it can in an intercultural context.

The discussion these authors set for learning based on experience is also interesting as it connects with the thesis here set forth (Egekvist et al., 2016: 45-48). The authors show the results of face-to-face meetings between cultures, where the similarities and

differences in cultural practices take on first role, as they are the more conspicuous signs to be observed and allow for what the authors draw from Holliday (2013; from Egekvist et al., 2016) as simple ways to compare what is seen and feels unfamiliar with what one does without being aware.

This would not mean, according to the authors, that learning takes place merely by being in contact. The avoidance, for example, of Boaventura Souza Santos “abyssal lines” (Dervin & Layne, 2013: 2):

Boaventura de Souza Santo’s metaphor of abyssal lines (2007) can help to move away from the dichotomies ‘us vs. them’ and ‘Europe vs. the rest of the world’ in intercultural education. Abyssal thinking is a system consisting of visible distinctions, based on invisible distinctions that are established through a logic that defines social reality as either on this side of the abyssal line or on the other side of the line

and Derrida’s “Hostipitality” “that is culturalist, ethnocentric, and rather negative discourses on the other represent some kind of ‘defeat of hospitality’ or hostipitality” (Dervin & Layne, 2013: 17), both through awareness, of their meaning and weight in intercultural relations, may be necessary.

Individuals should therefore be made aware of this type of effect as a way to avoid them, as well as realize that it is not through mere reading about a culture one understands it or its individuals, since “[c]onscious, critical and analytically orientated reflections are needed in order to develop a personal attitude and overview.”(Egekvist et al., 2016: 45) – the answer would be to learn about and also experience the contact with other cultures. We propose that instead of “educating” the “others”, one must re-educate oneself, both through their presence and in their absence.

This re-education going through a focus on the similarities, as explained by Egekvist et al. (Egekvist et al., 2016: 46), “might result in a deeper sense of global citizenship, while a focus on differences could be used as a point of departure to reflect upon normality and the social construction of culture”. In a way, as similarities would bring union, differences would bring curiosity and reflection.

Direct contact may also present itself as an opportunity for looking into our own categorization strategies, as a way not just to perceive them, but also change them and

even realize there is no ground to support them (Egekvist et al., 2016: 46). To see ourselves even, through the eyes of others, the (lack of) power given to us and to others in these created images, to be aware and mindful of these concepts and the importance they sustain in relations between people and, of course, in an intercultural context, as a means to be more effective interculturally. Not perfect or flawless, as that can never be obtained (Egekvist et al., 2016: 46-47), due for example to linguistic problems or episodic moments that remain unexplained, but clearer in what one shows and sees.

Also as these authors mention, it is what is done also after these experiences of contact that can have a lasting effect, when used to create the ground for future contact in an intercultural context – to learn and reflect after each experience about the situation and the self in it (Egekvist et al., 2016:47-48).

With McConachy and Liddicoat (2016) there is also a closer look to be had into the connection between what is culture and what is linguistic. For those wishing to improve their intercultural communication competences, the authors call attention to its central and profoundly linguistic character, to be able to effectively move “between cultural frameworks in the interpretation of pragmatic acts by reflecting on the nature of the practices of language in use encountered and the cultural knowledge and assumptions implicated in their interpretation”(McConachy & Liddicoat, 2016: 26) - it is insufficient to understand the “me/us” and the “you/they” as close and different at the same time, it is in the communicator’s practice to go between and to always see the result as a construction not as natural or definitive but as an ever-changing relationship of meaning. To be aware of self and others communication permits, according to the authors, that the “intercultural communicator develops to varying degrees of sophistication”(McConachy & Liddicoat, 2016: 27), from the sense of difference and direct relation between norms and essence, to an insightful awareness that praxis has a contextual logic at its core and that these are not absolutes at every moment and are present in all cultures, just with difference degrees of meaning.

This translates into awareness also, from the authors and our perspective, into a fairer interpretation of linguistic practices within a context. It permits also to see that such interpretation is therefore limited but can be adapted and transformed in such a way that “individuals are able to draw together cultural understandings of meaning making that lie both within and beyond language, providing an important site for intercultural mediation.

(...) one way of bridging the divide between language and culture” (McConachy & Liddicoat, 2016: 27).

To consider here is also the work of Hoff, who speaks of the challenges of intercultural communication and the promotion of learning in related matters focused on a “constructive and creative manner” (2016: 57).

The author touches the need to view learning as a sequence of stages or phases, similar to what we will describe as similar to the cycles in an agile methodology, such as Scrum. In Scrum a few directives call to this fearless cyclic type of thinking and acting. Jeff Sutherland (2014) speaks of how planning is useful but of the necessity of change. That first one must learn, then change and only then can you be something as an organization, as a team. He speaks of the need to look outwards for answers and that one should not guess, but instead plan, do, check (inspect) and act (adapt). The author gives an important clue as to this agile perspective, which is to fail fast so that you can correct problems early on, and for which, without hesitation, you should simply observe, orient, decide and act.

As Hoff (2016) sees the learning phases or stages, connected to Byram’s model (1997, from Hoff, 2016: 57), we see the cycles of Scrum as a methodology:

To what extent, then, are ambivalence and uncertainty recognized as a part of ‘the intercultural speaker’s’ experience as he engages with otherness? Byram’s model acknowledges that the ‘intercultural speaker’ may go through ‘different stages of adaptation to and interaction with’ otherness, and that these stages may include ‘phases of acceptance and rejection’ (*savoir être*) (Byram, 1997, p. 58).

When the author mentions the drawbacks to be overcome (2014, from Hoff 2016: 58), we see a connection to the work environment envisioned by Agile, of focusing on communication and involvement as path to find a connection, which we will later come back to:

This means that the model to some extent incorporates elements of conflict and ambivalence, but the central aim for the ‘intercultural speaker’ is to overcome such temporary drawbacks in order to establish a harmonious relationship with an interlocutor, or to help along such relationships between other individuals. For instance, the ‘intercultural speaker’ helps ‘interlocutors overcome conflicting

perspectives' (savoir comprendre) and to 'negotiate agreement on places of conflict and acceptance of difference' (savoir s'engager) (Byram, 1997, pp. 61, 64). It should be noted that 'the intercultural speaker' acknowledges the fact that opposing views may not always be possible to reconcile. However, this appears to be a solution for which he 'may settle when all attempts of a harmonious fusion of horizons have failed, rather than as positive conditions for the communication process' (Hoff, 2014, p. 514).

When the author gives the hope of a deeper engagement to be drawn from disagreement (2014, from Hoff 2016: 58) we see again an agile methodology as possibility:

In terms of its potential to enhance 'the intercultural speaker's' awareness of the complex and frequently conflictual nature of intercultural communication, then, what may not be adequately expressed in Byram's model is an acknowledgement of how conflict, misunderstanding and disagreement may lead to 'meaningful communicative situations in which the participants are deeply engaged, thus contributing to a higher level of honesty and involvement' (Hoff, 2014, p. 514).

To do so, knowing the end will not, cannot be found on a first try, that options will always be multiple as are the interpretations, given they are generated by humans, that there is "a multiplicity of possible, even conflicting, interpretations that must be considered and negotiated in order to make sense of human discourse or a text, and the implicit ideologies involved must be identified and challenged" (Hoff 2016: 59).

When reading Ferri (2016), a few questions came to mind, connected to this author's essentialist and neo-essentialist intercultural communication theorization and we believe that if a culture, a language are mutating at all times, for you to be an IEP then so you must be mutable, change and embrace, as culture and language do, such change, not as a positive or negative, just as a fact. If the essentialist manner is proven, as the author shows, as limited we must find another way to learn, to communicate, a way that embraces the unpredictable character of the "dynamic process of communication" (2016: 98), a model that can be applied in any context.

As the author, so do we see intercultural communication being based on "the idea of deferred understanding, meaning the acceptance of risk taking and incompleteness in communication" (Ferri, 2016: 98), and the consonance with the agile environment of

falling fast and returning with that knowledge for a new attempt at intercultural effectiveness.

To contact, to do, to learn, reflect, redo, re-contact, re-learn in an agile manner, to find the “alternative understanding of competence that relies on a dialogic idea of communication closely aligned to a Levinasian interpretation of the ethical, which is connected to the experiential sphere and the bodily aspects of lived human subjectivity” (Ferri, 2016: 99). To see IEP as those that know that “inter” means not one-sided and cultural means not just between two discrete cultures.

What we want to try to clarify here are the possibilities for different methodological frameworks. which as the author says, “provides the opportunity to shift the focus from predominant discourses related to business relations, intercultural training and language learning in higher education to the development of viable alternative perspectives that redefine the immanent and contingent nature of intercultural dialogue” (Ferri, 2016: 117).

The dominance of self versus “other(s)” from multiculturalism –“widely subjected to a political-ideological lens, focusing both on the dominant or host society, and on the migrant or (allegedly) minority groups” as Sarmiento expresses (2016: 125) - to interculturalism’s acceptance of movement, stream-like journey, on the mutual-“analysable as movement with an underlying stream of consciousness, as manifested in critically aware journeys, in mutual knowledge, understanding and communication” the author defends (Sarmiento, 2016: 125) -, and the political and scientific stance of each, these ideas as Sarmiento transmitted them would be a simile to the waterfall paradigm versus the agile paradigm we will try to demonstrate. The first being focused on dominance, command-control model, the second connected to through the analysis through “hybrid, segmentary and heterogeneous thinking” (Sarmiento, 2016: 125).

Sarmiento (2016: 129) also emphasizes here, related to intercultural competence, an aspect well connected with the agile framework, which is that of the frequency of interaction, in this work between immigrants and citizens, to us between IEP and the “other(s)”:

[F]requent interaction between immigrants and citizens of member states is a fundamental mechanism for inclusion, emphasizing the importance of communal fora, intercultural dialogue and information about immigrants and their cultures. The key point here is the inverse of a mere celebration of diversity of cultures as

folklore or as ethnic versions of classic multiculturalism. What is involved here is the positive encouragement of actual encounters between different groups and the creation of dialogue and joint activities. Of course this does not mean that intercultural dialogue has not been part of the multicultural philosophy and practice. But it becomes evident that the idea of multiculturalism has succumbed easily to an interpretation of ethnic cultures, with strictly defined boundaries and static essential components, without internal dissent.

We see also here our idea that the IEP looks first at the self, then at the self interacting with the “other(s)”, not the other way around, moving from the approach where “commodified cultures orderly display themselves for the comfort of dominant groups”, seeking an acute understanding of what Sarmiento calls the “homogeneous entity, seeking a complex and dynamic multiplicity instead” (Sarmiento, 2016: 130).

The author also shows us in a way other differences between multiculturalism/waterfall effect and interculturalism/agile effect. Where one is cautious and expresses power, the second looks for communication. Where one is static, the other is shifts and changes. Where the first wants to dominate and is rigid, the other is “deeply involved with everyday reality, changes boundary lines, negotiates conceptions and explores transformative dynamics of communication” (Sarmiento, 2016: 138).

Furthermore, we see the connection here in the acceptance of failure and in the cycle-recycle mode as natural in communication as in agile, as a process/processes and with it the connection of the nature of an IEP with the need to accept that, to be part of that.

For Wahyudi (2016) it is the complexity and dynamic nature of culture as a concept that makes it hard to define. Therefore, when in the presence of an intricate phenomenon should we not dissect it, work it in the simplest way but at the same time respecting that it is complex, that we should not believe to have a simple answer to it, and that it is necessary to return to our view of it regularly? As the author continues, we believe also that at this point in space and time, where we have contact tips and challenges closely making it possible to contact with others in this world, both physically and virtually, what is “ours” and “theirs” becomes fuzzy.

We are with the author (2016:143) when he defends that this is

especially true when culture is seen from a postmodernist perspective rather than a modernist view, which sees culture as a national attribute (Holliday, 2009). In a postmodernist perspective, any categories are ‘perspectival’ and are ideologically governed by the creator of the categories (Dervin, n.d., Discourse of Othering). Holliday (2009) argues that the notion of collectivism and individualism, native-speakerism and language standards are ‘ideological acts within unequal worlds’ (Holliday, 2009, p. 144).

This does not mean that the creator of the categories cannot change her perspective and reconnect concepts.

We share with Zotzmann that “competence-based approach to intercultural education seems to have little intrinsic validity. Instead it is driven by the marketization of the education sector and the concomitant pressure to provide a well trained and flexible workforce” (2016: 252).

We trust instead that, as the author states, “The global graduate is supposed to embody the qualities employers look for in an ideal way: She is internationally versatile, ideally multilingual, and effective in contexts of diversity” (Zotzmann, 2016: 252). To prioritize instead reflection over performance, as the second will inevitably improve through the first; to seek “win-win” connection over the distortion of “mutual recognition and increased understanding” (Zotzmann, 2016: 252).

The author then gives us embryonic reasons for the need for IEP and the connection to what we see as a solution, which is the agile mindset, when she articulates (Zotzmann, 2016: 252-253) that:

“Due to her flexibility she can be relocated, will voluntarily go wherever job opportunities arise, and can adapt to local circumstances. She is willing to distance herself from her taken-for-granted assumptions and to relativize her values according to the demands of the situation. (...)”

In summary, the interculturally competent global graduate is the ideal ‘entrepreneurial self’ who regulates her own conduct according to the demands of the market (...) This hyperflexibility comes—normally—with emotional costs. As (...) global graduates also need coping strategies and resilience. (...)

In order to contribute to a more just and equal society—if we choose these to be our aims—that offers better conditions for mutual understanding and recognition, we need to move away from the idea that higher education is there to provide a ‘useful’, adaptable and flexible workforce for highly volatile labour markets.(...)

In the case of intercultural education, we might start by rejecting the output, performance orientation and concomitant terminology of the competence approach altogether.”

It seems that the market both calls for IEP and for them in an agile context.

## 1.2. Why the need is growing

Ragnarsdóttir (2016: 76-77) speaks of several reasons why the need for IEP is growing:

- “Globalization and international migration have produced transnational communities and culturally diverse societies (Osler & Starkey, 2005)”;
- “emerging global cultural economies are ‘driven largely by the new information and communication technologies that make it possible for people not only to travel across vast distances but also to remain connected’ (Dolby & Rizvi, 2008 ,p. 2)”;
- “young people ‘who have a multiple and mobile sense of belonging view themselves as neither immigrants nor as tourists’ (Dolby & Rizvi, 2008 , p. 2), but ‘consider themselves to occupy an entirely different space’ (Dolby & Rizvi, 2008 , p. 2)”;
- “Elliott and Urry ( 2010 , p. 15) claim that ‘all social relationships should be seen as involving diverse “connections” that are more or less “at-a-distance”, more or less fast, more or less intense and more or less involving physical movement’. Thus many connections with peoples and social groupings are not based only upon propinquity, but also on absence or imagined presence”;
- “Cummins ( 2009 ) has discussed how the increasing mobility of people between countries has given rise to social tensions ‘as societies find themselves dislodged from their national identity comfort zone’ (Cummins, 2009 , p. 53)”;

The need for IEP grows together with the need to avoid conflict and a sense of dislodgement. It grows as grow the communities that virtually and physically are in contact. It grows together with the technological and economic opportunities and

challenges. It grows with the fast pace of recognition and estrangement, of seeing the “other(s)” and our selves.

According to Janet Stovall’s presentation on TED Talks in July 2018, where she presents the case for racism, but where we see intercultural teams as an issue also, “Business should get single minded about racism [...]. Ethnically diverse companies perform 33% better than the norm. Forbes’ best workplaces for diversity enjoy 24% higher revenue growth.”

Aside from revenue, we believe organizations may see their place in society as part of it, as influencing it positively or negatively and not as merely independent from it. Therefore having to work within and together with society at large. For Eckstein and Buck (2018:190) to have this global perspective may have a positive effect on the organization itself alongside the positive effect it may have on society, for the focus it allows on the needs of what is external to the company.

Organizations need then to have people prepared to contact with other organizations, institutions, countries’ cultures.

### 1.3. Core Characteristics of an IEP

In the work *A Profile of the Interculturally Effective Person* (Vulpe et al., 2001), the question on what constitutes an IEP is sought. The basic need for this work is stated: "(...) a clear, concise statement of the performance we expect of an intercultural effective person did not exist." (Vulpe et al., 2001: 2) - so other questions may rise with this answer: if the profile does not exist, how do you know you are training people properly for an intercultural context? And if you don't know, how can you be sure that you are not doing the opposite? With these questions in mind the authors concluded that there is somewhat of a common ground those building theory around the matter base their work upon, but that declarations on the matter were lacking.

With this in mind, they went in search of observable cues and "made an assertion that the behavioral indicators set forth in this profile would enable an evaluator to determine the relative effectiveness of a person in an intercultural environment" (Vulpe et al., 2001: 3).

We will assume that when people come into your culture they are building a new culture for you. Even if it one of resistance. You, in your own settings, as has been discussed, will need to be an IEP; you being an IEP is not just you going into a different setting.

Going back to the work itself, we face a listing of what constitutes an attribute to be considered an IEP and they are to communicate in a respectful, cooperative and productive way, in and with other cultures, adapting skills to local conditions and constraints in a way that the IEP feels also at ease towards said cultures. All this is aimed at responding to the needs of various organizations that imply working abroad or within but where several cultures should work together. One would expect that to create a model that one can learn and simply apply in so many different situations to be difficult and we may even ask if it is desirable or just reductionist or simplistic. Someone explaining to others who we are or how we act, having never met us, by just knowing where we were born may well be the opposite of not just the truth but even of being useful.

The work of Vulpe et al. (2001) has sought to provide an inventory of the general-level and core competencies, while giving also detailed behavioural indicators, not of what to expect in a different culture, but rather of what a different culture should expect of you. Here is a table where we have tried to compile some essential information to permits us to move forward:

Table 1 - IEP's major (abstract) and core (specific) competencies, according to Vulpe et al. (2001)

| Major Competencies<br>(Abstract) | Core Competencies<br>(Specific)  |
|----------------------------------|--|
| Adaption Skills                  | Cope with culture shock and ongoing challenges                         |
|                                  | Enjoys enriching experience  |
|                                  | Keeping with ideals, behave so as to enhance acceptance of new culture |
|                                  | Respect the local culture (attitudes and behaviour)                    |
|                                  | Show humility  |

|  |   |
|--|---|
| An Attitude of Modesty and Respect                     | Show self-confidence and promote change when need be                                |
| An attitude of understanding of the concept of culture | Understand the concept of culture and its influence                                 |
|  | Understand own culture conditioning   |
| Knowledge of the Host Country and culture              | Desire to know the other  |
|  | Possess specific historical and sociological knowledge of host country when need be |
|  | Possess specific structural and political knowledge of host country when need be    |
| Relationship Building                                  | Socializing skills  |
|  | Cross-cultural management skills  |
| Self-knowledge   | Knows how thinking, feeling and reacting are connected with personal background     |
|  | Is aware of personal strengths and weaknesses                                       |
|  | Sees and deals with own reactions to ambiguity                                      |
|  | Knows personal management and work style  |
| Intercultural communication                            | Reasonable and sensitive when conveying thoughts, opinions and expectations         |
|  | Does not fear mistakes and prefers to participate in local culture and language     |
|  | Uses shared meaning   |
|  | Seek the bridge created by local language use                                       |
|  | Empathizes with local views of the world  |

|                                      |   |
|--------------------------------------|---|
| Organizational Skills                | Balances the adaption and the self-behaviours |
|                                      | Shows networking skills                       |
|                                      | Creates reconciliatory practices              |
|                                      | Focus on the task while managing resistance   |
|                                      | Politically astute                            |
|                                      | Professionally resourceful                    |
| Personal and Professional Commitment | Want to contribute locally                    |
|                                      | Aware of own motivation and expectations      |

It is the purpose of this thesis to use the IEP profile as the basis for the theoretical construction of a framework, which would combine these defined "skills, knowledge and attitudes (...) and the more specific behavioural traits" (Vulpe et al., 2001: 5) with the concepts enticed by the agile conceptualization of work, which we will go further into later on.

One becomes aware of what an IEP should strive to become but not what it is in a certain culture that has a certain number of defining characteristics – that type of model is a recipe that does not understand the ingredients. You become, by drawing from the first option, a flexible agent, prepared for change.

We hope later on to provide examples within *Star Trek Voyager* (STVOY)/Science Fiction (SF) to show these competencies and respective behaviours in an agility driven type of environment.

The goal is, as a human being to exhibit all of them. Nonetheless, as the authors put it, “no living human will exhibit all these qualities and perhaps not even close to all of them” (Vulpe et al., 2001: 11). The authors also call attention to the difference in skills, range, priority, judgement about the specific situation and difference between home and host cultures as points to be considered. Even if this work does not aim at domestic fields, we

believe that with the adaption we have in mind, it could be used also in contexts at a domestic level.

## **Chapter II – Can agile frameworks help with the need for IEP**

In this second chapter, we look into frameworks such as Sociocracy, Beyond Budgeting, Open Space and specially Agile that are used within organizations as streams that can take on also the task to bring into organizations IEP, taking the synthesis of BOSSA, by Eckstein and Buck (2018) as basis.

We look into core values that drive these streams, such as Self-Organization, Transparency, Constant Customer Focus and Continuous Learning, as shown by the authors, to connect them to IEP by exploring their possible contribution to inserting the need and moving forward for IEP within the processes of organizations.

## 2.1. What is Agile framework

Agile is not a methodology, it is a work culture, it is a work environment.

It is giving quick responses to changes in that environment. It is being flexible towards a set procedure or process.

In its origins, you find software development at the core, as a way of working that allowed programmers to develop the product without pre-detailing all steps and having to keep to them till the end.

It is a response to a growing technological world that benefits economic and political betterment.

It is a way that connects with the human way of thinking, of planning but rethinking through the creation, learning or developing process, in a different manner from the past, forcing the mind to think of all the obstacles, to list them and then tackle them one by one, and finding that the end product of that movement is the best one possible.

There are five main characteristics of the Agile work culture (Alton, 2017): (1) Flexibility, (2) Responsibility Distribution, (3) Fast response times, (4) Autonomy and (5) Limited formalities.

In this context, to be flexible is paramount. Facing a problem without looking at it as something with only one solution but also not attributing the solution to a member but to the team. All provide the input and therefore reach exits to the problem that a single mind

could not reach in the same time. Members also face flexibility in rhythm of work and work settings.

This leads to fluidity in the division of the workload and variation in the responsibilities taken by members who may work together in a specific moment and share the responsibility of a task.

As there is a deep importance given to speed, the new is quickly adopted, may it be standards or policies or just taking on a task and quickly deciding on the way to go. Because you have a flexible team this means the decision is made in a fast manner but that it is also done in the best manner possible by a group not just an individual.

This generates an environment where people are more prone to autonomous work, where they take on tasks without having someone assign them.

All this leads to a simplified structure with restricted formal definition on the way something is achieved, as this is the team's responsibility. Instead of someone setting the way the team will work, there are people who create the necessary settings for the team to work to its best.

When it comes to transition to this new culture there are major shifts to consider (Denning, 2015). The goal becomes the satisfaction of the customer, and no longer the earning of money. The team reports to itself and each of the members to a manager. The job of the manager is to create the conditions the team needs to move forward, may it be in providing what is needed or removing obstacles. Instead of rules, a detailed plan and reports you have best practices and work cycles in action. Instead of assuming what the customer, or those answering on their behalf, thinks you seek feedback. Your first worry is not to deliver a product in a defined date, but that any product is the best product you can deliver on a date, and for that you seek to be clear on what has happened so far and not hide mistakes. You communicate; you are not controlled and commanded.

Within this ever-changing and evolving frame of work, there are characteristics viewed as necessary or that would be preferred for effectiveness. Because one is expected to always be prepared for change, then change must be a normal setting, one must adapt to the new quickly and even know that the change is part of the development of work, as moments that will be dealt with (Lipman, 2017). Here enters also the greatest mind-set which is the will to communicate, the knowledge that the furthest the team members are

from each other (physically, in values, in language) the worst it is for the business, so communication which has always been key is here paramount and must follow a flexible, daily, fluid path. Also to communicate the expectations in the clearest possible way and to find motivation in the satisfaction of doing your best.

Eckstein and Buck (2018) tell us that an expert in this framework would say that to work properly within it one must inspect and adapt, through regular retrospectives (moments where you look back onto what has been accomplished and plan). This will allow you to sustain properly a flexible type of reaction, to be able to learn from the market (outside) and from your organization (within).

### 2.1.1. Key Principles in the Agile work environment

From the start, the Agile work environment was used in software development. Instead of the traditional Waterfall method (one task after another, with a deadline and only acceptable if all the requests made at the start were present), the new model would be the basis for work methodologies where the focus was to shift to the end user. This meant the development would be aligned with your business needs, instead of with a rigid procedure.

#### 2.1.1.1. Four Values Stated in the Manifesto

At the start, coming up with the new frame, a manifesto was drawn. It contained four values - <http://agilemanifesto.org/>) - and twelve principles - <http://agilemanifesto.org/principles.html> -, which we believe are important to list.

The four values stated in the Manifesto were:

1. Individuals and interactions over processes and tools;
2. Working software over comprehensive documentation;
3. (Customer) collaboration over (contract) negotiation;
4. Responding to change over following a plan.

Clearly, as the signers declared, “while there is value in the items on the right, we value the items on the left more”.

Putting the focus on intercultural relations, these values, in the context we are inserting here, would be transformed only slightly, by adding the words in bold:

1. Individuals and interactions over processes and tools;
2. Working **interculturally effective relations** over comprehensive documentation;
3. (Customer) collaboration over (contract) negotiation;
4. Responding to change over following a plan.

#### 2.1.1.2. Twelve Principles Stated in the Manifesto

Going further with this idea, into the twelve principles, they were

1. Our highest priority is to satisfy the customer through early and continuous delivery of valuable software.
2. Welcome changing requirements, even late in development. Agile processes harness change for the customer's competitive advantage.
3. Deliver working software frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4. Business people and developers must work together daily throughout the project.
5. Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
6. The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.
7. Working software is the primary measure of progress.
8. Agile processes promote sustainable development. The sponsors, developers, and users should be able to maintain a constant pace indefinitely.
9. Continuous attention to technical excellence and good design enhances agility.
10. Simplicity--the art of maximizing the amount of work not done--is essential.
11. The best architectures, requirements, and designs emerge from self-organizing teams.
12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

#### 2.1.2. Key Principles in the Agile work environment applied to IEP thought

Shifting these key principles to intercultural relations would mean stricken through words are too specific for this explanation and added words in bold are necessary for this explanation:

1. Our highest priority is to satisfy the ~~customer~~ **self and other** through early and continuous delivery of valuable **and interculturally effective relations**.
2. Welcome changing requirements, even late in development. Agile processes harness change for the ~~customer~~ **self and other** 's competitive advantage.
3. Deliver working **interculturally effective relations** frequently, from a couple of weeks to a couple of months, with a preference to the shorter timescale.
4. ~~Business people and developers~~ **self and other** must work together daily throughout the project.
5. Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.
6. The most efficient and effective method of conveying information to and within a ~~development~~ team is face-to-face conversation.
7. Working **interculturally effective relations** is the primary measure of progress.
8. Agile processes promote sustainable **interculturally effective relations**. ~~The sponsors, developers, and users~~ **self and other** should be able to maintain a constant pace indefinitely.
9. Continuous attention to technical excellence and good design enhances agility.
10. Simplicity - the art of maximizing the amount of work not done - is essential.
11. The best ~~architectures, requirements, and designs~~ **interculturally effective relations** emerge from self-organizing teams.
12. At regular intervals, the team reflects on how to become more effective, then tunes and adjusts its behavior accordingly.

All parts of the relationship would actively be involved in the development cycle for interculturally effective relations. The main rules in effect are regular communication of the involved parts, where those a team interacts with will give feedback, as well as those for which the team works. This would ensure that the results of the work would be high in quality and delivered timely.

To allow for a connection to the ever-growing process of becoming an IEP, here is a more in depth analysis of the Agile work environment. We relate work not merely with the act

of performing tasks in a business/your job, for example, but to work in its broader extent and common synonyms – effort, endeavor, industry, performance, production, struggle, task, trial. We base the knowledge on Agile in the works of Martin (2003), Schwaber (2004) and the Agile Alliance - <https://www.agilealliance.org/> .

To that purpose, imagine going through a yearlong training session, in class, to acquire the means to become an IEP. After the training, and for an even longer period, one would use the skills acquired and act as one is an IEP. Within an Agile work environment, the objective is that all the training be segmented and frequently tested to meet the requirements.

With the Agile environment, simplicity would be paramount – for that, one would need to understand the end goals and needs, instead of long readings of complex details on what it is to be an IEP.

The proof that the effort was working would always be shown by it being tested, as the only measure of success for being IEP is having interculturally effective relations. The team and individuals that were to profit from said relations would need to consider them hassle-free and productive.

The complete recognition from the start that said team and individuals would be subject to change over time would be recognized from the start as a way to better embrace change as a part of the process. Just as any other Agile based project, this would be one that would use a scalable model were changing needs can be accommodated.

Another pivotal aspect would be the need for face-to-face conversations/contact. Effective communication, were expressions, intonation and questions are considered part of the process of properly establishing needs and goals is what happens in an Agile work environment and would be used for the IEP definition.

Within the Agile work environment, one last aspect is to be considered, and that is self-organization. This type of setting seeks simplicity and to achieve it micro-management must be avoided and trust must be found organically.

Using Agile with the objective that your team looks at interactions in this type of environment means that after a sale, a contract failed or won, after international meetings, the team would analyse together how to improve before the next iteration.

The goal of this methodology is to reduce waste and can potentially be used in any work place that accept the agile work environment.

## 2.2. What is Sociocracy framework

Eckstein and Buck (2018) describe a Sociocracy expert as someone that sees the main focus as having to be on power structure to solve the agility problem. This means that a top-down hierarchy can never deliver agility to an organization.

The Sociocracy Group (<http://thesociocracygroup.com/home/basic-principles/4-principles/>) establishes the following as principles for the Sociocracy stream: Consent, Circles, Feedback and Election.

Within an organization then, the established policy for making decisions, for deciding how things are done within the organization, would have to have all the principles into account.

The first principle - Consent - is immediately set apart from the concept of consensus. That distinction is at its core, as within Sociocracy, decision does not require that all agree, but that none object with a sensible reason. In the group no one is able to identify a risk so a decision must be made and the proposal at hand must be tried out at an operational level.

The second principle - Circles - clarifies that a sociocracy is made up of teams or circles. These are teams work in a self-organized environment, and define their methods and manage their budgets, policies and decisions, all based on the first principle of consent. Each circle is associated to a specific type of value or aim to be delivered to a (inside or outside) client and is made up of people from different areas necessary to the circle.

The third principle - Feedback - is used ubiquitously. This is essential for ending the top-down structure in organizations as it is done through double-linking, not just managers giving feedback to the level bellow and so on. This allows for knowledge from the bottom levels to be fed back into the organization. This is done through operational and representative roles, where the first provides down guidance and prioritization on decisions made and the second provides feedback and guidance to the top. Both roles are involved in the consent stage of decisions.

The fourth and last principle - Election by Consent - is a way of involving all that elect into a responsibility framework, as all take part in the election of the feedback representative. The election is done through the first principle, that is, by consent within the circle to be represented.

### 2.3. What is Beyond Budgeting framework

The Beyond Budgeting stream focuses on the budget to bring agile solutions to organizations. Eckstein and Buck (2018) put this stream's expert advising the organization to seek flexibility to react to market changes by not defining an annual budget.

This stream's principles (<https://bbbt.org/the-beyond-budgeting-principles/>) are Purpose, Values, Transparency, Organization, Autonomy, Customers, Rhythm, Targets, Plans and forecasts, Resource allocation, Performance evaluation and Rewards.

These principles are to work together in giving inner stability to an organization removing the need to focus on budget. The objective is that people are moved by inspiration and not financial targets. This inspiration is to be set upon shared values and sensible decisions, not imposed and constricting rules.

The concept of transparency appears here as an important factor to prompt self-regulation and innovation. Also the concept of accountability within teams in a trust based environment.

Also very important is the need to connect to the customer at all levels (stakeholders, different teams with different aims in business rhythm based approach management, avoiding a waterfall effect not just on decisions but also on objectives, using simple and unbiased processes for planning and estimating, making resources available as needed not as pre-planned.

A holistic view on the performance is advised with peer feedback involved. The underlying concept is that evaluation is done for growth not punishment and that one is rewarded once a shared success is achieved.

### 2.4. What is Open Space framework

For the stream Open Space we provide the synthesis of Harrison Owen, on the Four Principles and One Law he defined ([http://www.openspaceworld.com/brief\\_history.htm](http://www.openspaceworld.com/brief_history.htm)):

What's the secret? Some have suggested that the Four Principles and One Law which guide behavior in Open space provide the clues. The principles are: 1)Whoever comes is the right people, which reminds people in the small groups that getting something done is not a matter of having 100,000 people and the chairman of the board. The fundamental requirement is people who care to do something. And by showing up, that essential care is demonstrated. 2) Whatever happens is the only thing that could have, keeps people focused on the here and now, and eliminates all of the could-have-beens, should-have-beens or might-have-beens. What is the only thing there is at the moment. 3)Whenever it starts is the right time alerts people to the fact that inspired performance and genuine creativity rarely, if ever, pay attention to the clock. They happen (or not) when they happen. 4) Lastly When it's over it's over. In a word, don't waste time. Do what you have to do, and when its done, move on to something more useful.

The Law is the so called Law of Two Feet, which states simply, if at any time you find yourself in any situation where you are neither learning nor contributing – use you two feet and move to some place more to you liking. Such a place might be another group, or even outside into the sunshine. No matter what, don't sit there feeling miserable. The law, as stated, may sound like rank hedonism, but even hedonism has its place, reminding us that unhappy people are unlikely to be productive people.

Actually the Law of Two Feet goes rather beyond hedonistic pandering to personal desires. One of the most profound impacts of the law is to make it exquisitely clear precisely who is responsible for the quality of a participant's learning. If any situation is not learning rich, it is incumbent upon the individual participant to make it so. There is no point in blaming the conference committee, for none exists. Responsibility resides with the individual.

Eckstein and Buck (2018) state that an expert in this stream would devote her time in creating the space for the unknown and uncontrollable, where actual innovation emerges from and would do so by instilling into people a sense of passion for an idea, as a way to fight the obedience to a command that inhibits peaceful but passionate agility.

## 2.5. Agility mind-set to enable IEP as Process

In the research work of Eckstein and Buck (2018: iii-vii) they have come across certain aspects that companies share in general, such as “a need for speed, face frequent market changes, deal with individual [...] needs of the customers [...], struggle finding and keeping talent [...] and find that the digital revolution means that there is hardly any place where software isn’t the disrupting factor independent of the industry’s original focus”.

The authors have found also that companies are trying to implement processes to keep up with this ever-changing environment. Many, the authors state, are doing so successfully by using some formula of Agile. The reasons why Agile is being introduced into organizations are mainly the way the products are proven as accurate and fast delivered to customers. For this reason, the concepts of the framework have been used, according to the authors, through adaption to other parts of the organization that are, not as initially, software development related.

The authors revise the concepts, adding other frameworks that can support Agile and synthesize it in a way that we believe can aid here also our hypothesis. If, as they say, “we can all learn to apply agile-like concepts to our whole organization, we’ll achieve similar revolutionary benefits across the board rather than only in the engineering department”, not just in specific types of organizations, but in all.

A question arises, which is how this can be achieved. For Eckstein and Buck a holistic view is essential and must take into account that Agility will be a profound challenge and that it currently is asking for guidelines that allow for its implementation in a whole company/organization, which is what the authors aim to provide.

After researching they come to four streams, one of them Agile. The second is Sociocracy. Then Beyond Budgeting and finally Open Space. We gave some information on each but the authors can be called upon to reach more detail on any of the sources.

We started by showing how each is described and connected to finally give a picture on what for us is a possible privileged setting for introducing IEP into the organizational day-to-day. We hope to do this with the help of the wider perspective offered by the authors, that is BOSSA, as it combines the four streams. Starting with their explanation of the name, “B = Beyond Budgeting, OS = Open Space, S = Sociocracy, A = Agile”, what we found most interesting is that they do not aim at giving a recipe, as they say

“BOSSA nova is not prescriptive; it flows with the situation at hand” (Eckstein & Buck, 2018: iv). This is also, we believe to show here, what happens for someone to work on being an IEP.

The authors (Eckstein & Buck, 2018: 107) tell us there is a way to connect the four streams, and explain how they touch each other in this new BOSSA perspective:

- double-linking in support and production in organizations (from Beyond Budgeting and Sociocracy);
- inspiration found on feedback as a means for continuous learning (in all four streams);
- connection through feedback both ways between management and value centre, to resolve tension between customer need and stakeholder value (from all four streams);
- strong connection between the value centre and the customer (mainly agile but supported by the other three streams).

An essential concept to grasp that relates to the need for BOSSA, which in our case study, presented later on, plays a paramount role, is the concept of VUCA, as the creation of the situation leads to the ultimate proof of an IEP. The need to create an agile context in an organization derives from the fact that, as will happen in our case study, organizations operate in a VUCA world/environment. VUCA means volatile, uncertain, complex, and ambiguous.

Bennett and Lemoine (2014) define VUCA as:

VUCA is an acronym that has recently found its way into the business lexicon. The components it refers to—volatility, uncertainty, complexity, and ambiguity—are words that have been variously used to describe an environment which defies confident diagnosis and befuddles executives. In a ‘VUCA world,’ both pundits and executives have said, core activities essential to driving organizational performance—like strategic planning—are viewed as mere exercises in futility. VUCA conditions render useless any efforts to understand the future and to plan responses. When leaders are left with little to do other than wring their hands, organizational performance quickly falls at risk. In this installment of *Organizational Performance*, we demonstrate that by overlooking important differences in the conditions that volatility, uncertainty, complexity, and

ambiguity describe, we have disempowered leaders. We show how leaders can appreciate the differences among each of these challenging situations in order to properly allocate scarce resources to preserve and enhance organizational performance.

For Eckstein and Buck (2018: 3-4) this world/environment came to be for many reasons, such as “the war of talent, the changing demands of the Millennials and following generations, digitalization, the need for high speed to market, globalization, surviving and/or thriving on disruptions”. Additionally, and perhaps more importantly to this case, organizations must deal with this VUCA environment and to survive and strive must do so with agility. In this context, the Agile framework comes into play and different types of organizations experiment using it to better understand and deal with complexity and unpredictability. The past (current in many cases) way of dealing was to plan every small move, every small decision, having specific moments in time to decide if something (some project) or someone/some team was acting as it was told or off-track.

This was a compromise with an idea/decision/plan through long periods, and by the end the idea/decision/plan was outdated, according to Eckstein and Buck (2018: 3-4) “almost the day the plan is finalized (or even before finished) because the market, the competitors and other influencing factors are changing so quickly”. This meant these changes, positive or negative could not be used to the advantage of the organizational but had to be dealt with nonetheless.

Organizations, needing to deal with these facts and wanting to turn around for success, have to find work environments that could help them survive the VUCA world. Environments that could help them work better, faster, in a more open and welcoming posture to creativity and simplification of human systems. The more complex the question, the stronger the need to quickly be able to bring in to an organization outside partners, to simplify the contact with costumers and other teams/communities.

For Eckstein and Buck (2018: 22-23) the main challenges set by the VUCA environment are for example size of the organization and people working in it. The later takes for us a special importance and leave here some ideas conveyed by the authors that we believe sustain the importance for IEP within organizations seeking agility in a VUCA environment, such as global teams and network type of structures:

(...) it is harder to find skilled people who can deal with the problems the digital revolution is asking for, which means companies have to look for talent everywhere in the world and can not search for skilled people only locally.

(...) starting with the Millennials, following generations have grown up in “networks” and not in hierarchies. Whereas the generations before grew up in communities like the Boy Scouts or church groups, younger members of the workforce grew up in more ad hoc and less structured organizations, where an equal voice and following one’s own passion is more important. Due to the wide usage of social media, it is more and more common to network and to speak up openly. People - not Millennials only - bring this behavior as well to work, which is not the typical behaviour in traditional corporations. This network also results in different expectations regarding work places. Companies have to adjust to these new expectations - inviting people to follow their passion, providing equal access to necessary information, respecting everyone’s voice, and not implementing hierarchies with autocratic power over one another. If companies are not preparing themselves for these challenges, they will struggle not only with recruiting skilled people, but also with keeping them.

(...) In general, typical human resource departments have elaborate systems of classifying work, creating job descriptions, and recruiting people to fill those jobs. A job description is a list of roles and responsibilities. [...] Innovation seems to come from being a person with a meaningful, informed, passionate, equivalent voice and great social skills [...] and not from someone fitted into a role like a clam in a shell.

In this description, we see the growing importance for organizations to be prepared and to prepare for intercultural relations, as the people for the jobs can be found anywhere and will need to be respected and heard to be kept.

## 2.6. Self-Organization, Transparency, Constant Customer Focus and Continuous Learning

The four aspects of Self-Organization, Transparency, Constant Customer Focus and Continuous Learning are interlinked in an agility driven environment. They are present in all streams focused and are therefore basic aspects for the BOSSA framework.

Here we present a brief description on what can be considered for each.

### 2.6.1. Self-Organization

Eckstein and Buck (2018: 61-63) start with self-organization - the ability for a team/person to self-organize without a direct command - as one of the cornerstones of the BOSSA framework. To achieve it the authors believe a “common goal, shared values, and ideals around equivalence in power, mutual respect, and fairness” should be the starting points, which would then enable self-organization within the whole structure.

Nonetheless, the structure itself would need revising and from each stream, BOSSA brings elements, which would strengthen the possibility for self-organization.

One of the elements is an aim directed at the customer’s needs, since “the customer brings in an outside pressure or force that drives the self-organization phenomena”. Another element is cross-functionality to look at a common aim from different perspectives. Trust that all want to do their best within the organization is also paramount, since rules and guidelines impede greatly autonomy and therefore self-organization. To have retrospective moments is also important to allow adaption to real needs and that decision is based on consent from all involved, using also double-linking (top-down but also bottom up) for feedback. Open meeting should also take place, “where anyone who cares about the issue is invited to attend or even call the meeting, and the topic is the priority”, following the belief that this open space for discussion can lead to and better solutions.

As the authors say, and applying this to IEP also, the concept of self-organization “creates trust. If the structures for encouraging self-organization are working well, then the level of trust should build over time” and help people establish interculturally effective relations.

### 2.6.2. Transparency

When it comes to the transparency aspect, Eckstein and Buck (2018: 69) transmit that in all streams this is an item very much relied upon. As they state, “transparency is a structure that reliably shows the truth to those who need to know it. Transparency doesn’t mean that information can’t be managed to meet legally required confidentiality and information overload”.

This leads us to believe that heightened transparency will help all act upon what is truly needed, regardless of how rough the information is and that it is always possible to scientifically understand a situation, as all necessary information is actually available. This means that those working on a matter (person/team) will have access to the necessary information to find the best solution/path possible.

### 2.6.3. Constant Customer Focus

Taking on three workflow process approaches, Eckstein and Buck (2018: 85-87) concluded that always a workflow strongly depends on “a system of feedback loops that enable constant customer focus by continually adapting to customer needs”.

Within the four streams, these authors found a common sense that looks to put the customer first, through organization directed at the customer and having the customer convenience guide the allocation/reallocation of resources. Taking from all streams, the authors come to a synthesis regarding the matter of customer focus, which is that, to start, customer focus should be the aim of the organization. This can mean that one uses interdisciplinary teams, where they have space and time to follow their passion believing they will look to satisfy the aim, that is, the customer, making teams/people to “organize to honor passion bounded by responsibility”.

To have the customer as constant focus also means to establish relations with the customer, so that both can learn from each other during the whole process - the organization from the customer feedback and the customer from what is gradually being delivered. The authors advise the use of the concept of personas and scenarios for ensuring this understanding and a minimum viable product, to test how what is to be delivered is far or close from mark. All this should happen from early on, so that with the feedback, the new cycle to be started (iteration) is closer to the best it can be.

The authors go back to the matter of the budget approach having to be also customer focused, this being accomplished for example by eliminating “time wasted by deleting (or at least reducing) the activities and processes that are not focusing on the customer as uncovered by a value stream analysis”. This means avoiding a waterfall approach (defining requirements, designing, implementing, verifying, maintaining) and instead using an agile methodology, such as SCRUM (Sutherland& Schwaber: 2017; Sutherland:2014; Schwaber: 2004). Here the system receives inputs from all fronts is

divided in sprints, with review moments and retrospective moments to provide frequent increments to the customer's product, where bi-directional relations between team, representatives, management and stakeholders are constantly being fed.

Also within the matter of budget, the authors see as important to keep "performance reviews, individual goals, and incentives aligned with the customer focus, including board members and the board team", no longer in just making a plan and those keeping to it receiving positive reaction.

Also for constant customer focus, representation from lower levels and from outside on management levels, basing this on legal structure to "establish the multi-stakeholder environment", for collaboration, avoiding a command and control system.

#### 2.6.4. Continuous Learning

Finally, Eckstein and Buck (2018: 97-98) see in continuous learning a fundamental aspect for an agile environment to arise within an organization. From the streams studied the authors derive the idea that learning will come from outside, from the customer of the organization, that it is by focusing on the customer that the organization/teams/team members will learn. For the authors, continuous learning "requires structure across different teams, roles, and hierarchies". This means that to thrive in a VUCA environment, an organization must put itself in a path of transversal level organizational continuous learning.

To do so, an organization must find a way to imbue itself of a rhythm that includes time for defining hypothesis, experimenting, learning from the result and feeding back the system for the next iteration. An organization must provide organized learning for individuals but also promote learning beyond training. It must look to teaching and organized research (sharing or publishing) for peer validation. An the simplest of learning ways, which is perhaps many times ignored, which is spontaneous learning from contact in moments that are not predicted, using stress, failure and reflection as tools.

#### 2.7. The BOSSA Synthesis

BOSSA framework, according to Eckstein and Buck (2018: 113-115), synthesizes the four streams - Beyond Budgeting, Open Space, Sociocracy and Agile, bringing to the fore

their common and strong aspects, for a practical start to generate an agility wide environment within an organization, despite or together with the VUCA world.

For this, the authors defend that feedback is the core element, as shown by double-linking which “provides the necessary feedback for self-organization to occur company-wide”, transparency which allows for “feedback about what’s going on”, constant customer focus, which involves getting “feedback from your customer”, which in its turn saves time, therefore money for all. Finally, feedback appears related with the continuous learning, as retrospective learning, training, interacting with all stakeholders, and teaching and presenting results, all have at its core feedback for learning.

Here is, in the words of the authors themselves, a summary of BOSSA (Eckstein & Buck, 2018: 113-115):

Self-organization: Use accountable cross-functional teams that select themselves and follow their passion with responsibility. (...)

Transparency: Create transparency for all involved in two directions by providing information and lowering the barriers to those seeking information (...)

Constant Customer Focus: “Focus wide” on every aspect of the company: product & process, structure and strategy, and individual contributions and people. (...)

Continuous Learning: Always learn and contribute to others’ learning, get feedback and adapt.

These will be concepts that we will focus on when trying to establish, regarding *Star Trek Voyager*, if we are looking at an example of an agility driven organization.

**Chapter III – Science Fiction as Testing Ground; Case Study: *Star Trek Voyager***

In this chapter, we explore some characteristics of Science Fiction (SF) in very broad terms, taking special trust into the seminal work of Darko Suvin (1979).

We explore the idea that by its characteristics, SF comes close to the mind-set of IEP.

We finally study a possible example for a work of SF – *Star Trek Voyager* (STVOY) – where we believe one can see in action IEP within an agile environmental type of organization.

### 3.1. What is Science Fiction

Contact brings new to the fore. We contact others, avoid contact with others, and the new is the motive. We seek and fear the new.

Science Fiction is a faked new. Through a fake new, we may learn to contact with the real new.

Science fiction (SF) is at the centre of this work. It is a genre that, as put by Thomas (2013: 6):

[O]ften builds and develops entire and seemingly new worlds (sometimes as thin disguises for our own world and often genuinely speculative or uniquely alternative existences) with characters that exist in extended narratives that readers and viewers can come to know and love (or hate). I can now see that my serial fascination embedded in watching TV's Star Trek or collecting Spider-Man comics blurred into my love for J. D. Salinger's Glass family spanning the few works Salinger offered this world. The fictional "other worlds"—whether SF, speculative, or literary—always have spoken to me as real and True.

For Sterling (2016), in an entry for Encyclopædia Britannica, it is "a form of fiction that deals principally with the impact of actual or imagined science upon society or individuals". Further along this author gives also an insight on another aspect of this genre, and you find here a ground idea on what interplanetary traveling, an aspect closely related to our example/case study work, is within the SF genre:

Flight into outer space is the classic SF theme. (...) At the conceptual dawn of space travel, it was enough just to be up there, escaping earthly bonds to revel in sheer extraterrestrial possibility. (...)

A certain disenchantment with this theme necessarily set in after the actual Moon landing in 1969, for human life in outer space proved less than heavenly.

The SF works that treat space travel with nuts-and-bolts realism are a minority taste. SF far more commonly omits the unromantic aspects of space travel, especially through one of the genre's commonest stage devices, the "faster-than-light drive," or "warp drive." Although this imaginary technology is no more technically plausible than lifelike androids, it is a necessity for the alien-planet adventure story. SF writers cheerfully sacrifice the realities of astrophysics in the service of imaginary worlds.

To us, Patrick Parrinder's statement is, nonetheless, the surmise of an essence of SF, that "by imagining strange worlds we come to see our own conditions of life in a new and potentially revolutionary perspective" (2000: 4).

In *What is Science Fiction? - Thoughts from Author David Brin* (2015) you hear that in thousands of years of literary history almost all of it dealt with fantastic elements, with heroes and gods doing things in an extraordinarily different way from humans. And then, between the 17th and 19th centuries, human life in most places changed with social order going through turmoil. What was then mainstream literature started to focus more and more on daily life. The focus turned to aspects and reflections on what went on.

In the middle of this came authors such as Mary Shelley, Jules Verne and H. G. Wells. They wrote about science and technology in their fiction works, which were to be the propeller of what they talked about in those works. The connection between these elements in work would be known as Science Fiction (SF). Right by the side of SF were still the old themes of fantasy. But the focus of one and other differ greatly on where the eye is pointed. With fantasy the eye points at what it does not understand, at what it cannot explain. With the other the eye points inward, to understand, to looking at the new with a scientific eye, finding out how things work. The characters are not special in the same sense as gods are. They are humans whose work can be replicated and who use tools produced by other beings whose existence is also deriving from our natural world.

As James Cameron puts it in *Story of Science Fiction* (2018), SF in its various forms is about the power of ideas, of showing possibilities; it is a series of statements about humanity. Within the several topoi of SF, take on the example of the topos of Aliens. They are in cases seen from the first contact perspective. Here you are called to look at

something for the first time. In other cases they are invaders. They bring about the fear of the unknown.

For example, in the movie *Close Encounters of the Third Kind* (Spielberg, 1977) – where a regular guy, finds himself chosen by aliens to accompany and learn from them, after a series of mysterious events unraveled by scientists of different areas – you have the first encounter experience, you feel the good and good inspires you – the propagation of good is at stake here. Take the title – a close encounter of the third kind, encompasses (1) the sighting of a UFO, (2) physical evidence and (3) contact. Not mere observation, but actual contact. Right at the start of the movie, you see the problem of translation, as a second barrier for contact, right after distance (physical or mental). This movie has even the ability to show us a language being used as means, as common ground (music, colour, light, mathematics), as unforced transcending of language itself.

SF is the great "What if". What if I encountered an Alien? What if others attacked it? Would I stay quiet or would I come to their aid? What if instead of Aliens we speak of Others?

Cases such as *District 9* (Blomkamp, 2009), where malnourished insect-like aliens are confined to live in a camp or ghetto and the plight of a human that sees himself transforming into the segregated alien or as in *Avatar* (Cameron, 2009) as humans we get the chance to see things through the body of the aliens and realize we are in fact the destructive force. Creating a whole planet, of beauty and credible ecosystem as means of showing our way of treating our own world and cultures we feel are not our own. In this planet, Pandora, some of us are trying to communicate effectively by joining their mind in a Na'vi's – this planet's dominant species - body, a hybrid called avatar they seek middle ground between species with such different ideological viewpoints, that is humans wanting natural resources and believing that as stronger or more powerful they are entitled to them and Na'vi protecting those resources at all costs.

By telling the story from the point of view of the Alien, we emphasize the danger of xenophobia, of marginalization, of deliberate oppression, of what it is to be oppressed, and all as ways to become human, as when you see things from that perspective can you be human enough.

Then, on the other hand, you have the metaphor for the humans' darkest side. As Nnedi Okarafor stated in *The Story of Science Fiction* (Cameron, 2018) "We use aliens to portray ourselves". As a vanguard member of the SF authors' community, challenging and decentering SF for the anti-colonial analysis, she sees here the alien and our relationship with it in SF as metaphor for what we are many times to each other, in what she is prone to consider neoliberalism acting as a form of neoimperialism in the postcolonial world. What once was your god given right is now your money given right.

This invasion is always in a way connected to *The War of the Worlds* of H. G. Wells (1898), and the idea of seeking superiority over others and on reflecting, on inward looking and questioning "How would it feel if it happened to you?". In this story Earth is invaded by sapient tripod bearing aliens, not seeking to know us but to use us to feed their own. In 1938, with a broadcasting of the story as reality, Orson Welles was able to provide the initial answer to over a million listeners who were to feel first-hand how it feels to be invaded, to not know why, to be the attacked one.

It connects with episodes of human history such as nazism, colonialism, world catastrophes and their consequences and terrorism. Examples such as *The Body Snatchers* (Finney, 1955) set also a way into slow invasion, comparable to the conformity, as metaphor for being taken over and having no expression. The seeds that arrive from space replacing us one by one, turning us into dust. Slowly they are what we are many times to each other, arriving, using the resources of communities, eradicating indigenous populations and destroying nature.

SF is the warning but not so similar to oneself that it blinds you. You recognize and reflect without being pushed or shoved or feeling directly judged. You realize you are the "Other", the "Invader", but too late, after you have already judged "Them" as acting in a wrongful manner, therefore judging yourself.

1985's *Contact* by Carl Sagan, is an example also of one of the most interesting themes of hard SF – how will we communicate? A woman, director of a search for extra-terrestrial intelligence (SETI) project finds herself in the middle of a decoding of a mathematical message sent by aliens so that we may build a machine to travel through wormholes, to find out that intelligence is part of the universe itself.

This is again brought to the fore with *Arrival* (Villeneuve, 2016), based on Ted Chiang's *The Story of Your Life* (2002), where communication is seen as tool or weapon and the determinism in existence. It also plays with how your habits of speech influence greatly the habits of thought. The effectiveness of communication needed to avoid misunderstanding. The need to truly understand and be validated in that understanding by the counterpart as only way to distinguish a gift from a threat.

Another great aspect of the alien topos is that they are not understandable or controllable concerning gender, so you cannot stereotype the behaviour without revealing yourself. Both in *Alien* (Scott, 1979) and *Aliens* (Cameron, 1986), the alien trying to survive, deposits eggs but has a head with a banana like shape. In addition, the main surviving character, Ellen Ripley, is an ambiguously gendered creature.

Science fiction has also the power of the self-preventing prophecy, as David Brin calls it (2013). When you see *Dr. Strangelove* (Kubrick, 1964), *Soylent Green* (Fleischer, 1973) or *Nineteen Eighty-Four* (Radford, 1984), based on the novel by the same name by George Orwell (1949), and launched on the same year where all the events taking place in the book would be a reality, you recognize an inspiration through fear that many readers felt as need to prevent these potent images coming true. "We all are to learn from these stories" seems to come to us. The first movie is an example of the fear of war and cataclysmic destruction, the second for fear of an overpopulated, depleted existence, where humans end literally feeding on humans. The culprits are here the consumerism, the decline in literacy and educational standards. Or the third, with global surveillance and manipulation of the public opinions as core sustenance for a (anti-) society, all based in a continuous re-writing of history.

SF is not tragedy. You are not condemned from the start- change is felt as standing at your back, pushing you forward, driving you on, not as a warning of unavoidable danger and despair but more of test-drives to our existence. A place where we can see multiple outcomes to decisions or indecisions or silences or outrages: all for the sake of entertainment but also as imaginary roads we can turn back from to go in different directions.

In SF we find also the topos of the Monster. They are many times literal manifestations of actions of humans. We bring them from mythology right into a possibility within nature

and ask the scientific question of how it came to be but also the spiritual questions of why, of who and what for was it created.

*Jurassic Park* (Spielberg, 1993), based on Michael Crichton's homonymous novel), for example, gives the answer that nature is an innovator and that life will find its ways, after humans clone dinosaurs and then find out that they cannot control them. You are confronted by the limits scientists should find even when they find that science does not have any. You have the monster so you can figure out how you would defeat it. You have the monster so you can push boundaries as far as you can, for example of gender - such as in *Alien* (Scott, 1979) where a woman saves herself and shows primal power, or *Resident Evil* (Anderson, 2002) where a woman explores her fears in a highly technologically developed society. The monster is society. The monster is many times you.

Another strong topos for SF is that of the Machine. This can be a cyborg, emotionless as in *Westworld* (Crichton, 1973), rebellious as in *Blade Runner* (Scott, 1982) or relentless as in *Terminator* (Cameron, 1984), or a combatant robot as in *I, Robot* (Proyas, 2004), or simply a personable programme, as in *2001: a space odyssey* (Kubrick, 1968) but it is always with machine self-awareness turning against us. They are visions into systems going wrong, even or perhaps because they are protected by the (asking to be defied) Asimov's Laws of Robotics. These laws were stated in Isaac Asimov's *I, Robot* collection (1950) and state that these forms cannot hurt humans, must obey but cannot be used to hurt humans and can only protect their own existence if the first and second are guaranteed.

Nonetheless, as if humans are there as a persistent villain, untrustworthy, as if hoping that the machine reacts, defies, finally says "No!" to a forced compliance all the while forcing us to test empathy with that human trait that is disobedience.

They are all, in the end, a history of disposable creatures. In a way, a history of the relation of humankind with slavery.

### 3.1.1. Topos of Outer Space/Space Exploration/Interplanetary Traveling

With *Star Trek Voyager* (STVOY, 1995-2001), to which we will come back further on, you are looking at our own species. In it we have learned from the mistakes, made a stronger society. We are not in a world of fantasy, Homeric or tragically waiting for the

gods to decide. Here you find a concretization of the genre itself as representation of change.

*Star Trek - The Original Series* (start in 1966) itself gave the opportunity to pose the question of how things could be if we respect the rule of “live and let live”. The allowed distance between reality and imagination gave a chance to talk about matters that were going on and that in so many ways still go on, on Earth. It showed people that were not white Caucasian in power positions, it gave hope of a difference in the future, that there are opportunities to learn.

Negative examples such as *Starship Troopers*, directed by Paul Verhoeven (1997) from the homonymous novel of Robert Heinlein’s (1959), serve as opposite metaphors of being. It builds on a time in Germany when certain attitudes, decisions, ways of seeing were not considered wrong and were quite admired. It touches exploration, colonialization and exploitation. It sets up a mirror of going but taking what we are with us. It shows us the seductions we fail to see as dangers. It does so through a group of four recent high school graduates that immediately join military forces in a war against bug-like creatures that has hysterical inter-planetary proportions, supported by an ever-repeating alien-hating/alienating media.

We as species test through SF the challenges we perhaps want to embrace, or feel we may have to face. We hope for incredible discoveries and to survive we have always had to explore and exploit. The way we explore and exploit is what SF shows us, a “this is how you do it, so beware” and sometimes “you could do it this other way, if you just tried”. The unknown, represented by outer space, has a primal attraction to it and through interplanetary travelling we seek to alleviate this attraction, and when not in reality, through SF.

Hard SF looks at this in the technical sense of how you would be able to do it, how you can make the idea work as opposed to Soft SF that connects to the why you would do it or not.

Artificial Intelligence is also a fertile ground for SF and allows for a look into mankind’s fears. It shows that not every advancement is for the betterment of humankind.

SF as literature, as Suvin (1979) sets it, is a literature of the new. It keeps its eyes on estrangement and on cognitive reasoning. We agree with these definitions and considering they are of essential content want to delineate them briefly.

### 3.1.2. Science to Fiction

In 1979 Darko Suvin published *Metamorphoses of Science Fiction*. In this book, he defined the genre's characteristics and topos that give force to Science Fiction. He also made distinctions between the genre and other genres. He spoke of the popularity of the genre, the affect it had on several key groups who connected with its values.

#### 3.1.2.1. Suvin's "Estrangement"

The concept of "Estrangement" is at the basis of Suvin's theory (1979: 3-15), as he considers SF as the "literature of cognitive estrangement" (Suvin, 1979: 4). The term "estrangement" was coined by the Russian Formalists and brings to attention the connection between recognition and new, permitting to see things in a new light.

Another important idea is that in SF you see "the ideal extreme of exact recreation of the author's empirical environment" (Suvin, 1979: 4) that will connect completely with the work environment of agile frameworks. Then Suvin sees an "exclusive interest in a strange newness, a novum" (Suvin, 1979: 4), which in its place is also at the base of the type of approach done in Agile work environments.

The genre itself appears to have taken the same path as the intercultural approach, starting with the syncretic explanation and moving slowly towards a "factual reporting of fictions" to look for "a new set of norms" (Suvin, 1979: 6), which would translate in Agile to just "factual reporting" and rethinking the process to respond to change.

In the SF approach the other is always a possibility, it is assumed, and the "aliens (...) are a mirror to man" (Suvin, 1979: 5). The newness is a mirror, not just showing the reflection of what we are but also showing what we can become, good and bad.

The use of "estrangement" is explained by Suvin as necessary for SF, as the interesting point where cognition and creativity meet. And here is another connection between the formal framework of the genre and that of Agile.

#### 3.1.2.2. Suvin's "Cognition"

An important differentiation made by Suvin is that between myth and SF, since SF lays strongly in cognition, by seeing the “norms of any age, including emphatically its own, as unique, changeable, and therefore subject to a cognitive view” (Suvin, 1979: 7). Where myth can connect to previous ways of viewing intercultural relations - “human relations as fixed and supernaturally determined” (Suvin, 1979: 7) – SF is found in periods of history where change and new views of what relations between people are truly or should truly be.

Again as in the agility driven frameworks, SF does not have as prerogative to explain phenomena but to problematize them and accompany them to where they take it, which may be better than finding a sole solution.

SF has different stages of development, so do Agile work environments. And just as SF, Agile is not prognostication and higher levels must deviate from euphoric views to prevent from losing prestige. In an Agile environment, as in SF, the aim is for teams not only to participate in “reflecting of but also on reality” (Suvin, 1979:10). Just as Agile, SF “implies a creative approach tending toward a dynamic transformation rather than toward a static mirroring” (Suvin, 1979:10), in a way connecting both through the same way of approaching the matter, with a critical view.

### 3.1.2.3. Suvin’s “Parameters”

Suvin (1979: 10) declares “all the estranging devices in SF are related to cognition”. He starts by pointing out the connection between the world created and our world, which in SF “is not a priori intentionally oriented toward its protagonists (...); the protagonists may succeed or fail in their objectives, but nothing in the basic contract (...), in the physical laws of their worlds, guarantees either” (Suvin, 1979:11). It is, as is Agile, a matter of uncovering better ways by doing. Both are “a diagnosis, a warning, a call to understanding and action, and – most important - a mapping of possible alternatives” (Suvin, 1979:12).

## 3.2. Case study of SF work – STVOY – IEP in an agility driven environment

*Star Trek Voyager* (STVOY) is a post-feminist set society. Women are not an accessory to men, they are not told they cannot do something by them. They simple do any of the

jobs alongside other men, other species. These matters are questioned only when the members of the Federation's Starfleet encounter other species. Simultaneously many species take on the role to subvert common depictions of traits as masculine as neither masculine nor feminine, such as the Klingon, where both genres are brutish and have a war mind-set.

Key positions of leadership are occupied without issue or comments. Janeway is the most prominent of them all. A Captain and by the last episode an Admiral. There is no question of her judgement, of her lack of romantic involvement. The crew does not see that as something to comment about. And all along you are invited to look at that as the simplest of common reality.

STVOY borrows from the whole SF as a genre, as it takes from several of its sub-genres. SF which is an idea driven genre, depicting worlds that might still be and potential disruption created by changes in technology or discoveries in science, that allow as example for contact with aliens or progress or influence of new ideas may have in society. SF shows what these can mean to the human species.

For example, hard sci-fi, with Arthur C. Clarke and Kim Stanley Robinson, gives its total attention to scientific accuracy. Soft sci-fi takes from social sciences, and has as frontier people Ray Bradbury and Ursula K. Le Guin. Then you have alternate reality sci-fi, dystopia, dying earth or steam-punk. *Star Trek Voyager* drinks from almost all of them.

The *Star Trek* creation in its entirety became a way to predict the human future in several ways most prominently when it comes to technology. Fans have grown and became scientists and the ideas have become a prophecy coming true. So instead of *Star Trek* predicting, it is inspiring the world and what it imagines comes true.

So, if we look onto this, other things in *Star Trek* may also become reality through those that view it. The way a SF creator extrapolates possible futures and with it allows for both the predictions to prevent themselves and for the predictions to inspire the existence of the predictions, transporting this to the social sciences, the relations and behaviors in SF characters, say in a high viewed example as *Star Trek*, and within it *Star Trek Voyager* and within it x and y characters may prevent on one side behaviors and inspire, sometimes even to action, on the other.

### 3.2.1. Selection of STVOY as case study

Why the *Star Trek* universe? It is the most popular SF anything in existence: 700 episodes, 30 seasons, 12 movies, over 2000 novels, short stories and graphic novels and countless fan produced works not officially sanctioned and dozens of conventions around the world (<https://www.patreon.com/treksptise>).

Inspirational ideas such as universal translators, Holograms, tablets and Bluetooth, replicators and Tele-transportation – with *Star Trek*, only a few of these are not yet a reality and all of them are at the heart of scientific investigation taking place. For us it is also important that the *Star Trek* universe has a VUCA sense to it and that a way is found for striving within it.

Interplanetary traveling has inspired and been used by several works. One of its strongest cases will be used in this study: *Star Trek Voyager*. Within *Star Trek*, why *Star Trek Voyager* (STVOY)? As example, as this gives strength to a learning process, but also for the extraordinary challenge taken on at the start of the series.

Here we believe to be necessary to give a brief plot overview, for which we used online resources such as Wikipedia.com and StarTrek.com and our own viewing of the series.

Between the year 2371 and 2378, USS Voyager (the titular starship) is transported by a powerful energy 70,000 light-years away, to the Delta Quadrant. This means that the crew will have ahead 75 years of travelling to find its way back to Earth, even with the technology at hand.

During that period, they must work together in keeping each other alive while travelling in space unknown to the Starfleet, of which Voyager is a part. The team must go beyond itself, and what it knows, to bring the ship and its surviving crewmembers to the destination.

An important moment is that when the transported surviving crew of Voyager and that of the Maquis/rebels ship it was searching come together to survive, compromising, coming to a consensual decision. They are, in a way, two different organizations being forced to work together and looking to do so the best way possible.

During their voyage, the group comes across several species, some aggressive (Kazon, Vidiians, Hirogen, Species 8472 and specially the Borg), some helpful, but seems to learn from all, as well as it does with the natural phenomena it encounters, in some cases with

great help for leaps in space, getting them closer to their objective faster. In other cases, the leaps arise from members of the team's suggestions and efforts to boost technology and welcome technology developed by encountered species. This means the team takes on opportunities from the environment, itself and those with whom it interacts.

Along the journey new member get integrated, some quite notably such as Seven of Nine, and their integration for themselves and all members is a huge challenge to the team as a whole. They are playing a role in changing the team's culture by interaction.

In the end, the team arrives home after seven (symbolic) years of travelling.

We also leave here a brief overview from the series webpage, which gives more technological insight into the ship itself ([http://www.startrek.com/database\\_article/star-trek-voyager-synopsis](http://www.startrek.com/database_article/star-trek-voyager-synopsis)):

Star Trek: Voyager (VOY) focuses on the 24th century adventures of Captain Kathryn Janeway aboard the U.S.S. Voyager. (...)—its crew complement is only 150—Voyager is fast and powerful, and has the ability to land on a planet's surface. It is one of the most technologically advanced vessels in Starfleet, utilizing computer circuitry that incorporates synthetic neural tissue. Ironically, Janeway's inaugural mission aboard Voyager was to be her last in the Alpha quadrant. While attempting to capture the crew of a renegade Maquis vessel, both her ship and that of the Maquis were pulled into the distant Delta quadrant by powerful alien technology. Unfortunately, there would be no similar "express" route to take them home again. Stranded 70,000 light-years from Earth, Janeway convinced the Maquis to join her Starfleet crew and serve together during the long voyage back to Federation space.

This is then an interplanetary travel set in a distant future, where contacts with several different species takes place.

Roberts (2016) justifies also in a way the choice for STVOY:

(...) the most important feature of 1960s TV SF was the development of the two most influential TV serials in science fiction, shows that would demonstrate powers of endurance far greater than their original framers could have conceived: the American show Star Trek (1966–69) and the British serial Doctor Who (1963–

89, 2005–). The extraordinary and, to an extent, continuing success of these two franchises says important things not only about the increasing dominance of TV as a cultural medium (and as the century moved towards its conclusion, TV has increasingly become the world’s major narrative mode, enjoyed by billions of human beings nightly, something that cannot be said of any other mode of art) – but also about the broader development of SF itself. By this last statement I mean two things: first, to reiterate what I have already argued, this is symptomatic of an increasingly visual bias of the genre. But I am also making an argument about the changes in the textual focus of SF. To some extent it is the TV serial – a collocation of individual texts subordinated to a premise or particular imaginative identity – that becomes the template for all SF textual production. Instead of producing singular, stand-alone texts, SF writers and creators increasingly produce ‘mega-texts’, interlinked sequences of texts, often spanning several media.

So the context of SF, the specificities of the Start Trek universe and specifically the story underlying STVOY, given it is a team facing an unprecedented challenge in a seemingly uncontrollable environment where it must be agile, these where the determiners for the selection of the series.

We will now clarify the specific selection made from the available data of the series.

### 3.2.2. Data we can put forward

As a starting point, and given the time and interest shown towards the series, a selection was made, based on spectators' number and looking to mimic the flow of the PRISMA (preferred reporting items for systematic reviews and meta-analysis; <http://prisma-statement.org/>), looking to collect data from the series and analyze it according to specific parameters that may support the proof or rebuttal of the hypothesis.

#### 3.2.2.1. General data

STVOY was first broadcaster in 1995 (2371 in the series) and ended in 2001 (2377 in the series). Aside from several other information on this series, the meaning of Federation/ United Federation of Planets and Federation Starfleet/Starfleet may be needed:

Federation - interplanetary state with 154 members that came together for “the utopian principles of universal liberty, rights, and equality, and to share their knowledge and resources in peaceful cooperation and space exploration”. It is one of three known super powers; it is, nonetheless, the only one that does not have one species subduing others, where the members come together freely and as equals.

Starfleet - the force for “deep-space exploration, research, defense, peacekeeping, and diplomacy” of the Federation. On behalf of the Federation, they were to go beyond the known to explore and to serve as representatives of the Federation member states.

Next we will give a short description of main characters, species encountered, general information on the seasons and episodes selected. Aside from viewing, that is, direct observation, we have read information from Wikipedia, Star Trek’s official webpage, several fan pages and television series webpages.

### 3.2.2.2. Main characters names and short description

For better comprehension of the work used as case study, we believe it is necessary to give information on the main/regular characters so they are presented in table 2.

Table 2 - Main characters of STVOY and respective short description.

| <b>Main character name</b> | <b>Main character short description</b>   |
|----------------------------|---|
| <b>Kathryn Janeway</b>     | Captain, she is the officer in command, managing the Voyager during its long journey, between 2371 and 2377.<br><br>Becomes Vice Admiral when the ship arrives to the Alpha Quadrant in 2377.<br><br>Heroically dies in a Borg Cube in 2380.<br><br>She is human. |
| <b>Chakotay</b>            | Starts as leader of a Maquis group that is pursued, and then rescued by Voyager.<br><br>Assigned First Officer in 2371 turns Captain in 2378.<br><br>Born and raised in a colony, he is Native American.  |

|   |  |
|---|--|
| <b>Tuvok</b>                            | <p>Infiltrated in the Maquis ship, at the start, he is a Vulcan (species) Lieutenant that with time becomes Lieutenant Commander, as Senior Tactical Officer and Chief Security Officer.</p> <p>He would later become a teacher in the Starfleet Academy after Voyager return to the Alpha Quadrant in 2377.</p>   |
| <b>B'Elanna Torres</b>                  | <p>Starting at the Maquis ship, she is a former cadet of Starfleet, who is half-human/half-Klingon (species).</p> <p>Once the crews of the Maquis and Voyager join, she becomes chief engineer.</p>  |
| <b>Tom Paris</b>                        | <p>Released by Janeway from a Federation prison, after being captured from a Maquis ship, he is to become the Senior Flight Controller from 2371.</p> <p>He is human.</p>  |
| <b>Harry Kim</b>                        | <p>On his first journey in space, he is Voyager's Operation's Officer.</p> <p>After Voyager arrives to the Alpha Quadrant, he replaces Tuvok as Senior Tactical Officer and Chief Security Officer.</p> <p>He is human.</p>  |
| <b>Annika Hansen/<br/>Seven of Nine</b> | <p>Born human, travels with her parents in a scientific exploration to learn more about the Borg (species).</p> <p>Assimilated when she is six years old, together with her parents and becomes Seven of Nine in the Borg Unimatrix 01.</p> <p>Freed by the Voyager crew in 2374, who help her reclaim her humanity.</p>   |
| <b>The Doctor</b>                       | <p>After Voyager is propelled into another Quadrant and the medical team is dead, a computer program with a holographic interface, that was to take on a temporary role if medical help was unavailable for a short period, becomes the full time medical officer for the crew.</p> <p>With time, receives a holo-emitter that allows him to leave sickbay and becomes more like a sentient being.</p> |
| <b>Neelix</b>                           | <p>Native from the Delta Quadrant, he is saved by Voyager and becomes a source of information for the crew.</p> <p>He also becomes chef and morale officer and, later on, Ambassador for the Federation.</p>   |

|            |  |
|------------|--|
|            | He is Talaxian (species).  |
| <b>Kes</b> | An Ocampa (species) rescued by Voyager at the start of the series, becomes the Doctor's medical assistant.<br><br>Leaves Voyager as her telepathic abilities become stronger.<br><br>Has a very short life span of nine years. |

### 3.2.2.3. Species encountered relevant for the study and short description

As it is through contact, of the main characters among each other but also with the species outside their organization, we believe we can draw conclusions on intercultural effectiveness, for these encounters to be clearer, in table 3 we provide a short description of a few species encountered by the STVOY crew.

Table 3 - Species encountered by STVOY crew relevant to the study and short description.

| <b>Species encountered relevant for the study</b> | <b>Species encountered relevant for the study - short description</b>  |
|---|--|
| <b>Kazon</b>                                      | A violent warrior species encountered in the Delta Quadrant, that is divided into factions fighting for resources.<br><br>For their characteristics, the Borg considered them unworthy of assimilation.  |
| <b>Vidlians</b>                                   | This species had been known in the Delta Quadrant for their appreciation and capabilities concerning arts and culture but after they suffered from a degenerative disease, they became focused only on medicine and prolonging life.<br><br>This lead to a more violent society where episodes took place of unauthorized harvesting of organs and terrible medical experiments. |
| <b>Hirogen</b>                                    | A nomadic species, had a long forgotten encounter with the Borg and lost and have been since then obsessed with hunting and try to find in other species a challenging prey.   |
| <b>Species 8472</b>                               | The name comes from the Borg designation for a tripod species and they are avoided by the Borg. This makes them, aside from  |

|                 |  |
|-----------------|--|
|                 | dangerous, interesting for the Voyager crew, as source of information to help fight Borg attacks.  |
| <b>The Borg</b> | <p>The motto of the species is “Resistance is futile.” - this is how they approach other species and inform them that what makes them distinctive will be assimilated; with it the Borg also show that they view themselves as clearly superior.</p> <p>The Borg are lifeforms cybernetically enhanced, made up of organic and artificial life, who communicate through a single collective consciousness, the Borg Collective.</p> <p>They seek to create the perfect species by assimilating other species and transforming them to be part of the Collective, as drones.</p> <p>We, humans, are species 5618, of the Borg catalogue. The Borg are developing their species for thousands of centuries, adding on to itself those it assimilates. 10026 species have been assimilated. They are the negation of how species 5618 many times sees itself when in its best form: free, diverse and as individuals.</p> |

We would also like to add a simple short commentary on a possible symbolic meaning of these species as organizations against which Voyager’s organizational typology is set:

- Borg as the organization that feeds on all others, destroying them and simply taking what it believes to be unique, turning into a soulless amalgamate;
- Kazon as the small-minded organization, filled with internal entropic fights;
- Species 8472, the blind mega-organization that seems to live in a parallel universe, which even a big sized organization fears;
- Hirogen, the organization feeding on the worst moments of other organizations, preying on their weaknesses;
- Vidiians, the once great organization, now obsessed with its survival at all costs.

3.2.2.4. Season start and end dates, number of episodes per season and number of episodes used for sample

As STVOY ran for several seasons that we took into account during the selection and viewing process, in table 4 is some general data on our case study duration and screening distribution.

Table 4 - General data on duration and screening distribution.

| <b>Season</b> | <b>Year(s)</b> | <b>Total Number of Episodes</b> | <b>Sample Number of Episodes Screened</b> |
|---------------|----------------|---------------------------------|---|
| <b>1</b>      | 1995           | 16                              | 3   |
| <b>2</b>      | 1995-1996      | 26                              | 3   |
| <b>3</b>      | 1996-1997      | 26                              | 10  |
| <b>4</b>      | 1997-1998      | 26                              | 11  |
| <b>5</b>      | 1998-1999      | 26                              | 14  |
| <b>6</b>      | 1999-2000      | 26                              | 7   |
| <b>7</b>      | 2000-2001      | 26                              | 6   |

### 3.2.2.5. List of Episodes Used for Sample, with number, name, short description

To better understand both the series and the selection of episodes, we provide a short description in table 5, for the sample used.

Table 5 - List and description of selected episodes.

| <b>Season/ Episode Number - Name of Sample Episode - Number of Spectators (millions)</b>   |
|--|
| <b>Short Description of Sample Episode</b>   |
| 1/1 - Caretaker (1) - 13   |
| 1/2 - Caretaker (2) - 13   |
| Voyager is sent on a mission to find a rogue Maquis ship and ends up in a different quadrant of the galaxy, where it finds a species guarded by the entity that sent them there and which is about to get extinct. |

Voyager member and the Maquis crew join forces to survive and add to the crew a Talaxian and an Ocampa.

The members of Voyager face the violent force that are the Kazon and, even at the expense of not having a way to return home, help the Ocampa by destroying the structure the Caretaker had built and which oppressed them.

1/7 - Eye of the Needle - 7,7

Voyager members find a wormhole, which connects to the Alpha quadrant. It carries a message but they cannot fit the ship in it. They receive a response, which gives them hope, until they realize it comes from a Romulan (species) ship; Janeway tries to find empathy with the counterpart; in the end they discover that he is 20 years from their past and died four years before their mission. In his time, he cannot transmit the message, as it would pollute the temporal line, which goes against values of the Federation.

Meanwhile the Doctor is treated with antagonism by several crewmembers and questions the Captain if he is undeserving of respect, since perhaps we should respect what we create and asks to be given a name to also help that purpose.

2/18 - Deathwish - 6,8

A member of an enigmatic entity seeks asylum in Voyager so he can commit suicide. Janeway will have to mediate the problem with a representative from the entity. The importance of facing the unknown without fear is focused and the question of the danger for society of individual rights that can only be protected as long as they do not affect the status quo.

2/21- Deadlock - 5,8

To avoid Vidiian territory Voyager is attacked by photonic explosions that generate two simultaneous ships/crews. Since only one can survive, the Captain, in her two existences must decide who sacrifices, being that in any case it will be a self-sacrifice.

Meanwhile the first baby is born aboard Voyager, and the Doctor must help solve physical problems caused by the fact that the baby is inter-species.

2/26 - Basics (1)- 4,9

3/1 - Basics (2) - 5,9

To save who they believe is the newly born son of Chakotay the crew loose Voyager to the Kazon, after a ritualistic suicide that sets off a bomb, and are left with no technology on a planet to survive. They must do so with their scientific knowledge and creativity.

Through cooperation and mutual help, they come to agreements with the local population.

The Doctor, with the help a secondary character, Mr. Suder, help Tom Paris return to the ship, as he had escaped to go ask for help in nearby planets.

3/2 - Flashback - 5,2

Tuvok suffers from a virus that causes his mind to go back to repressed memories of his time under Captain Sulu, from the Excelsior ship.

Tuvok explains his values as a Vulcan, where the foundation is the same as structure, which leads to logic, that is the essence, and together both lead to control; he views fun based behaviour as a human dangerous trait, caused by humanities egocentric nature, with curiosity as its avenging grace.

3/8 - Future's End (1) - 5,6

3/9 - Future's End (2) - 5,8

Voyager encounters a time-travelling ship and is propelled to the twentieth century's Earth. They find out that the time-travelling ship has travelled to 30 years before and its captain is already on Earth, interfering technologically/ historically with the Federation rules of not influencing the special-temporal continuum.

The Federation's collectivist future opposed to the individualistic present of Earth. The Doctor gains autonomy through technology.

3/14 - Alter Ego - 4,8

During a holodeck luau, Harry Kim becomes enamored with a character, leading to comparisons on the emotional dimensions of Humans and Vulcans. Tuvok advises him to meditate and use logic.

Polynesian based holodeck characters are stereotypical, with no depth, as other characters.

The holodeck character falls in love with Tuvok and takes possession of the ship and in the end, it is found that it was an entity that survived alone in a nearby nebulae.

3/18 - The Darkling - 4,3

The Doctor tries to gain depth by adding aspects of different historic personalities. He becomes erratic, attacking a few characters. B'Elanna detects that the added personalities, although having strong characters also had severe negative characteristics. The Doctor stops her from divulging the information as he is now very modified and tries even to delete the Doctor's core characteristics from the personality, screaming to Kes "Cruelty before kindness, evil more primal than good, more deserving of existence", to which she returns "You're wrong. Empathy and kindness

are basic to all forms of life (...) the very organs and cells of the body cooperate with each other otherwise they wouldn't function (...) Families, societies, cultures wouldn't have evolved without compassion and tolerance. They would have fallen apart without it".

3/22 - Real Life - 4,4

The Doctor creates a holographic family for himself, but they act only to please him. B'Elanna confronts him and suggests she inserts more realistic characteristics, which he accepts.

At the same time Captain Janeway puts Voyager on the path to find who/what destroyed a space station where they were going and ends studying a destructive wave phenomena.

Meanwhile the family of the Doctor prove to be more than he wants to handle, causing him problems. In the end, Paris suggests that he re-joins his family, as it is in hard times that stronger bonds come to be.

3/23 - Distant Origin - 4,4

The Voth species has 22% higher brain capacity than humans. They have set doctrines that do not condone with recent findings from one of their scientists; the new theory shows proof that the Voth have a mammal origin. They study the Voyager crew incognito.

The Voyager crew is transported to the Voth city ship and informed they have no rights under the doctrine as non-indigenous beings. The crew learns that the Science Ministry of the Voth is corrupt and that this leads to progress being suppress together with truth.

The Voyager crew is advised to stay away from the Voth to survive.

3/25 - Worst Case Scenario - 4,7

A story is created for the holodeck, where a Maquis riot is enacted.

Several members wonder who created the story and to what purpose. Tuvok declares himself the creator; being responsible for tactical operations, his intention had been to predict what could be done if, when the Maquis had joined the Voyager crew, they had a hidden agenda and did a riot.

Fearing it could cause animosity among a now united crew, Captain Janeway suggests that communities need entertainment and culture and creative outlets, and therefore the story must be ended.

3/26 - Scorpion (1) - 5,6

4/1 - Scorpion (2) - 6,5

Voyager enters Borg dominated space and comes across species 8472, an organic life form, immune to technology, therefore immune to the Borg Nano probes.

To ponder the options, Janeway listens to log entries from other captains of the Federation who have encountered the Borg. One of them, the Captain of Enterprise, Jean Luc Picard, shows the Borg with a win-lose mentality, obsessed with conquering, not able to repent or be reasoned with.

On the other hand, as species 8472 is determined to exterminate all life in the Galaxy, Captain Janeway and her team see no other solution than to come to an agreement with the Borg Collective to defeat it and survive.

The Borg want to assimilate Voyager to defeat the threat, the Captain suggests they send a representative, a Borg Ambassador - Seven of Nine. The Borg then want a massive destruction weapon, and the Captain negotiates low range torpedoes. The Borg want to be in possession of the weapons, but the Captain fears once it is with them Voyager will be deemed dispensable and assimilated. Using logic and under attack, the Borg sacrifice their ship and some are transported to Voyager and try to bypass the Voyager system and take over the ship. They end up launched into space, except for Seven of Nine, who is called to help the Voyager crew.

When the Borg consider they have prevailed, they terminate the agreement unilaterally and move on to try to assimilate Voyager to the Collective. Chakotay is able to get Seven of Nine to lose the connection with the Collective and the Captain decides to keep her on board and help her regain her humanity, since what separates them better from the Borg is friendship.

4/6 - The Raven - 4,8

Seven of Nine does not understand some tasks, especially when related to disorganization or creativity. The Captain suggests she creates opportunities in the holodeck to free her mind and look for pleasure. Seven of Nine believes pleasure is irrelevant.

Seven of Nine has visions of her past previous to her Borg assimilation; she declares not to have been traumatized by the Borg that assimilated her, that she does not fear them.

Meanwhile, the ship is crossing the B'omar territory. The species demand they deactivate their weapons and that they do not make space inspections while crossing.

Believing she is being called by the Collective to return, Seven of Nine disappears, the B'Omar do not let them inspect to look for her, declaring that if they do it will be an act of aggression. The Captain refuses to accept that she was not adapting and Tuvok wants to capture her.

When he finds her, he makes her rationalize what is going on, that if she in fact was still Borg she would not feel emotional. She believes that she is receiving a signal from a Borg ship and when they land on a moon, they find the ship Seven of Nine had been in with her parents when the Borg intercepted them, when she was still Annika Hansen.

The Captain prefers not to negotiate any further with the threatening B'omar and advises Seven of Nine to learn more about her parents to encourage her human features.

4/8 - Year of Hell (1) - 4,7

4/9 - Year of Hell (2) - 5,2

During a year, Voyager's crew faces a ship that possesses temporal reversion technology and is eliminating whole civilizations to allow for the return of their species to a power position. They are attacked without reason and the conflict escalates to the point where the Captain is alone in a destroyed Voyager fighting to free Chakotay and Paris who have been taken hostage.

Janeway forms an alliance and reveals the importance of having allies, prevailing in the end with the idea that the temporal continuum is not to be reversed as this will cause further/different evils.

4/12 - Mortal Coil - 3,9

Neelix organizes a traditional celebration of his species. In a mission, he is killed and Seven of Nine offers to use her Borg Nano probes to try to bring him back. She is successful but Neelix returns disturbed by the fact that there was nothing to be found in death. He had expected to be reunited with his lost family.

Seven of Nine and Tuvok discuss the logic of a universal truth - death - having such an importance for so many species. Neelix questions the continuation of traditions for the sake of younger generations after the belief is destroyed and Chakotay helps him find peace in the idea of the irreplaceable influence of each being.

4/17 - Retrospect - 4,2

Voyager is making an exchange with an arms seller for a canon. The seller sees in Seven of Nine the nano probes potential and harasses her. She attacks him and with time comes to believe he had attacked her before the event. The Doctor helps her regress and discover the seller had taken Borg technology from her.

Janeway defends Seven of Nine from the accusations of the seller about being persecuted and losing business due to the accusations. The Captain brings the case to justice and the seller escapes mid-trial. The captain has him pursued, but they end up seeing that there are no actual proof against him but the seller attacks them and ends up being killed.

Janeway denies the Doctor the request to delete the event from his memory as she believes they are now better and will deal differently in the future by learning through guilt and shame of their actions.

4/18 - The Killing Game (1) - 4,3

4/19 - The Killing Game (2) - 4,3

The Voyager crew meet the Hirogen without realizing it, as they change the crew's memories through neural interfaces, so that they believe the violent simulations of World War II, taking place inside the holodeck, are reality.

The Hirogen believe to be a superior race but are faced with the fact that a defenseless prey does not give merit to the hunter and that species that do not change will die isolated as they lose identity through the loss of culture.

4/21 - The Omega Directive - 3,7

Voyager sensors detect a molecule and activate the Omega Directive. The Captain asks for the help of Seven of Nine, as the molecule has been studied by the Borg for its power. It is at the same time very complex and harmonic that destroys subspace. On one hand, if it is disturbed they may lose the warp speed reactor but they may also find a way to return home faster. Seven of Nine has an impulse to try to make sense of it and the Captain reminds her that safety is the most important thing.

5/8 - Nothing Human - 4,1

An unknown species attacks B'Elanna joining their bodies to survive. The Captain suggests creating a hologram specialized in exobiology to help them save B'Elanna. After the hologram is created they realize it is based on a scientist who committed several crimes. The hologram is very much contrary to the stereotype of his species and speaks of the necessity of cooperation. With time he reveals cruelty, not being preoccupied with killing the species that attached itself to B'Elanna. The Doctor confronts him and he speaks about all the experiences humans have made on other species on Earth and even within their own species to find solutions, cures, to make scientific discoveries.

In the end, the crew seek to maintain an ethic, peaceful and reconciliatory mind frame and the Doctor deletes the hologram and all related files.

5/13 - Gravity - 4

Tuvok remembers what he learned, the Vulcan philosophy of infinite diversity in infinite combinations, the logic hidden in plain sight so that you will ignore it. He speaks to his teacher about the true learning relying in questioning.

Then he goes on a mission with Tom Paris and their ship falls in a region that is under time distortion, where several months are only two days on Voyager. Voyager crew tries to save them.

They meet a woman whose ship had also been lost on the planet because of the distortion and that falls in love with Tuvok. Tom Parris advises him to follow the moment and Tuvok reminds him he is married and when she shows him her intentions, he refuses her. They learn her language, as the universal translator does not work.

They are saved together with the woman and take her to her home planet.

5/20 - Think Tank - 3,7

After meeting a group of bounty hunters - the Hazari - that want to capture them, the Voyager crew is approached by a projection that offers to help them - as a Think Tank - find a way out if they give them Seven of Nine. The Captain suspects that they have been approached by those that set the bounty hunters against them.

Seven of Nine finds the proposal acceptable if it saves Voyager but Janeway will not accept it and goes for the Hazari, capturing two of them and showing them the Think Tank had fooled them all and joins forces to defeat the common enemy. They do so by having a meeting where they discuss all their ideas and end up pretending Seven of Nine decided to join them to save all and in fact she goes to their ship to cut the communication between the members of the Think Tank.

5/26 - Equinox (1) - 3,2

6/1 - Equinox (2) - 3,8

Voyager is contacted with a distress signal by another Federation starship, Equinox. Equinox is on a scientific mission and had been propelled to the Delta Quadrant by the same entity as Voyager. Captain Janeway starts to be suspicious of the captain from Equinox and the Doctor helps her find out that the ship was engaging on experiments in the aliens it encounters to get more speed, with the consent of all its crew members.

Janeway does not abdicate of her principles to get her team home faster and wants to contact the aliens to make peace. Equinox kidnaps Seven of Nine and the Doctor and does not help Voyager when they are under attack by the aliens. Captain Janeway seeks revenge and is deeply offended by the behavior of the Captain of Equinox.

They find a species that knows how to contact the aliens and make an agreement to hand over the location for Equinox. Janeway plans to transport all on board of Voyager before the aliens get to them but in the end can save all but the Equinox captain who sacrifices for them all.

6/9 - The Voyager Conspiracy - 3,6

Seven of Nine becomes convinced there is a conspiracy in the fact that Voyager was sent to the Delta Quadrant. She starts connecting a lot of information and accuses all members of being part of the conspiracy in one way or another. Captain Janeway and Chakotay become aware and after investigation realize she has been attached by a space bug. When she tries to escape, Janeway follows her and reminds her of the path they have been tacking together to find Seven of Nine's humanity, calming her down.

6/12 - Blink of an Eye - 3,7

The crew detects a strange phenomenon that affects the ship. At the same time, in a nearby planet Voyager is seen as phenomenon and starts to be worshiped by the inhabitants. While on the planet, centuries go by, for Voyager just a minor time passed. The inhabitants try to contact Voyager but for them a long time passes before any reply is returned. They become a more technologically evolved civilization and continue to try to communicate.

The Voyager crew understands they have had a great influence in the civilization already and the Doctor volunteers to spend incognito 2 days (2 seconds for Voyager) on the planet but in the end he spends 3 years and reports the influence Voyager has had on all things - culture, art, religion, education, technology.

The planet enters a phase of space exploration and 2 astronauts travel to Voyager but the difference in time turns fatal for one of them. As the other recuperates, and realizes everyone he knew is now dead, the planet starts an attack on Voyager. The Captain convinces the astronaut to return to his planet and explain the truth and his return is successful.

7/12 - Lineage - No information available

B'Elanna Torres finds out she is pregnant inter-species of Tom Paris. They both ask for and receive advice from their colleagues to a point that they feel too much interference. The Doctor finds out that the baby, a girl, has a problem and uses technology to find a solution, through a holographic image. This image shows the baby has clearer Klingon physical traits and B'Elanna does not like this, as she remembers her childhood. She asks the Doctor for genetic changes which the Doctor opposes to and so does Tom Paris. When asking for the support of Janeway, she also refuses to help Torres. B'Elanna feels isolated and Tom Paris gets advice from Harry Kim, who goes for reconciliation and empathy.

B' Elanna comes to the point of tampering with the Doctor's actions to have him state that extensive genetic changes are necessary but all is found out and when confronted by Paris she confesses she is afraid he will not be able to handle having two Klingon in his life, as her father was not able to handle this and left his family. Tom Paris convinces her that they are quite different from her parents.

7/25 - Endgame (1) - No information available

7/26 - Endgame (2) - No information available

In the final episodes it is shown that 10 years have passed since they returned and that the trip took them 23 years. Janeway is now an Admiral, Harry Kim is a Captain, the Doctor has a wife, Tom Paris is a holodeck novelist and B'Elanna is a diplomat. Chakotay has died and Tuvok has developed a mental illness. Janeway is teaching a class on the Borg and refuses to speak of Seven of Nine and is shown having strange behaviour.

You are taken back in time, to the moment B'Elanna and Tom Paris baby is born. Neelix has left them to be with the survivors of his species. You see Seven of Nine and Chakotay on a date and in love. Tuvok experiences the symptoms of his disease. A hypothesis comes up for Voyager to go through a wormhole. They encounter a Borg ship and the Borg Queen does not give up on assimilating them. Her cube ships and drones are protecting the wormhole for a Borg invasion to the Alpha Quadrant.

Back to the present, Janeway has a plan and stubbornly goes back through the wormhole to deliver to Voyager future technology so they may go undetected by the Borg and her past self-accepts the help. Present Janeway seems to have a hidden plan to save Seven of Nine from death and Tuvok from disease that involves preventing them from going through the wormhole, but both consider that their lives are insignificant when set against the life of so many. They all meet and decide the journey is far more important than the destination and they will not risk.

Admiral Janeway convinces them she will go to the Borg Queen, who accepts safeguard to Voyager as long as Janeway is assimilated. Janeway nonetheless has a virus that destroys the Queen and therefore the axis of Borg vessels guarding the wormhole, as soon as they begin her assimilation. As they pass a cube ship follows them but at the other end there are, as Admiral Janeway has planned, hundreds of Starfleet ships waiting to protect their safe return home.

### 3.2.2.6. List of Episodes Excluded for Sample, with number, name, and short reason for exclusion

Aside from the mentioned episodes, the selection and screening of the episodes gave us a clearer view of content, which allowed the exclusion of episodes not included above. We present in table 6 the list of excluded episodes and reason of exclusion.

Table 6 - Excluded episodes and reason of exclusion.

| Season/ Episode Number - Name of Excluded Episode |
|---|
|---|

| Short Reason for Exclusion of Episode  |
|--|
| <p>4/23 - Living Witness</p> <p>Only one of the characters takes part, the Doctor, as it occurs 700 years after Voyager existed.</p>                         |
| <p>4/26 - Hope and Fear</p> <p>Focusses the same theme of alien vengeance and technological development as other episodes.</p>                               |
| <p>5/2 - Drone</p> <p>Same theme of Borg technology as other episodes.</p>   |
| <p>5/6 - Timeless</p> <p>Use of the temporal continuum change as theme, as other episodes.</p>   |
| <p>5/7 - Infinite Regress</p> <p>Same theme of Borg technology as other episodes.</p>  |
| <p>5/11 - Latent Image</p> <p>Focused mainly on an eliminated memory of the Doctor.</p>  |
| <p>5/12 - Bride of Chaotica!</p> <p>Episode takes place in the holodeck with aliens that confuse it with reality. Similar premise as other episode used.</p> |
| <p>5/15 - Dark Frontier (1)</p> <p>5/16 - Dark Frontier (2)</p> <p>Same theme of Borg technology as other episodes.</p>                                      |
| <p>5/17 - The Disease</p> <p>Same theme of relationships inter-species as other episode used.</p>  |
| <p>5/22 - Someone to Watch over Me</p> <p>Romantic theme, not interesting for the study.</p>   |
| <p>5/24 - Relativity</p> <p>Use of the temporal continuum change as theme, as other episodes.</p>  |

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|---|
| 6/4 - Tinker, Tenor, Doctor, Spy  |
| Very focused on the Doctor, a character very present in several episodes selected.          |
| 6/11 - Fair Haven   |
| Romantic theme, not interesting for the study.  |
| 6/15 - Tsunkatse  |
| Kidnapping of Seven of Nine used in other selected episodes.                                |
| 6/22 - Muse   |
| Romantic theme, not interesting for the study.  |
| 7/11 - Shattered  |
| Use of the temporal continuum change as theme, as other episodes.                           |
| 7/14 - Prophecy   |
| Focusses the same theme of alien vengeance and technological development as other episodes. |
| 7/15 - The Void   |
| Use of theme of parallel space as other episode used.                                       |

### 3.2.3. Analysis of the data for demonstration of the Hypothesis

In table 7 bellow we present examples from STVOY where observable behavioural indicators of an IEP core competency appear and signal the connection with the core values for the streams previously presented in the agile framework theory from chapter II - Self-Organization, Transparency, Constant Customer Focus and Continuous Learning.

In all the episodes viewed, we found clear traces of all core stream values. The Voyager crew/team:

- self-organized according to situations at hand and resources available,
- were always transparent about goals and desires, both with each other and towards those they encountered,

- aimed at completing rapidly the tasks at hand that would both bring them closer to home and allow for a clearer knowledge of the environment in which they were travelling through and

- learned at each stage about each other, the technology they came across, the species in the path, teaching each other about learned things also.

For us, all species encountered, planets visited, technology learned were projects carried out by the Voyager team, where each of its members had roles that connected with their developed capabilities, and not job descriptions. All these activities were carried for the purpose of the organization returning to the Alpha Quadrant without damaging its surroundings and other encountered organizations.

The examples are identified through the name of the episode. When possible a character that has relevantly shown the behavior is also mentioned by name. Episodes show an interculturally effective team(s); characters show and Interculturally effective person.

The major competencies (abstract) and derivative core competencies (specific) are present here through their related behavioural indicators (observable) and all follow the descriptions of the model of Vulpe et al (2001), from chapter I.

Table 7 - Behavioral indicator observed with relevant corresponding episode/character.

| <b>Behavioral Indicator Observed</b>   | <b>Episode (s)/Character Name(s)</b>  |
|--|---|
| <b>have organized well the material logistics of setting up a new life in the host culture</b>   | All members; Doctor; Caretaker (1) and Caretaker (2); Blink of an Eye; Lineage; Endgame (1) & Endgame (2)   |
| <b>maintain a positive attitude that contributes to staying motivated professionally and living happily</b>  | Kathryn Janeway; Tuvok; Doctor; Caretaker (1) and Caretaker (2); Eye of the Needle; Worst Case Scenario; Year of Hell (1) & Year of Hell (2); Mortal Coil; Think Tank; Equinox (1) & Equinox (2); Blink of an Eye; Lineage; Endgame (1) & Endgame (2) |
| <b>react to situations that are unfamiliar and stressful in a manner that does not undermine their capacity to function in their work or personal life</b> | Kathryn Janeway; Tuvok; Doctor; Caretaker (1) and Caretaker (2); Deathwish; Deadlock; Flashback; Future's End (1) & Future's End (2); Distant Origin; Worst Case Scenario; Scorpion (1) &   |

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|  | Scorpion (2); Year of Hell (1) & Year of Hell (2); The Omega Directive; Gravity; Equinox (1) & Equinox (2); The Voyager Conspiracy; Blink of an Eye; Lineage; Endgame (1) & Endgame (2)   |
| <b>participate in a personal support system, in which they receive (and reciprocate) emotional and other support from family, friends, and colleagues</b>                    | Doctor; All members; Deathwish; Flashback; Worst Case Scenario; Year of Hell (1) & Year of Hell (2); Mortal Coil; Retrospect; Gravity; Equinox (1) & Equinox (2); The Voyager Conspiracy; Blink of an Eye; Lineage; Endgame (1) & Endgame (2) |
| <b>express satisfaction with living and working in a new culture</b>   | Neelix; Doctor; All members; Mortal Coil; Blink of an Eye; Lineage  |
| <b>demonstrate a spirit of adventure in terms of exploring the new environment</b>   | All members; Future's End (1) & Future's End (2); Year of Hell (1) & Year of Hell (2); Gravity; Blink of an Eye   |
| <b>recognize that strict adherence to personal ideals (e.g. regarding what constitutes corruption, relations between the sexes etc.) may cause problems in a new culture</b> | Seven of Nine; Doctor; Deathwish; Flashback; Future's End (1) & Future's End (2); Alter Ego; The Raven; Retrospect; The Omega Directive; Gravity; Equinox (1) & Equinox (2); Blink of an Eye; Lineage   |
| <b>can understand, and perhaps in some circumstances make accommodations with, local behaviour that conflicts with personal ideals</b>                                       | Seven of Nine; Doctor; Deathwish; Future's End (1) & Future's End (2); The Raven; The Omega Directive; Gravity; Blink of an Eye; Lineage  |
| <b>behave in a manner consistent with local cultural norms regarding behaviour and appearances (e.g. dress)</b>  | Seven of Nine; Doctor; Future's End (1) & Future's End (2); The Raven; The Omega Directive; Gravity; Blink of an Eye  |
| <b>demonstrate by word and deed that they appreciate and indeed seek out and acknowledge the contributions that local culture brings to the work issues at hand</b>          | Kathryn Janeway; Tom Paris; Deadlock; Flashback; Future's End (1) & Future's End (2); Mortal Coil; Gravity; Think Tank; Lineage   |
| <b>do not give the impression of feeling self-important and superior (even if power and respect does accompany their position in the host culture)</b>                       | Kathryn Janeway; Deathwish; Deadlock; Distant Origin; Gravity; Think Tank; Equinox (1) & Equinox (2); Blink of an Eye   |

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|---|--|
| <p><b>do not let pride or fear of appearing unknowledgeable prevent them from seeking support from local friends and colleagues</b></p>                             | <p>Kathryn Janeway; Deadlock; Flashback; Future's End (1) &amp; Future's End (2); Distant Origin; Year of Hell (1) &amp; Year of Hell (2); The Omega Directive; Gravity; Think Tank; Equinox (1) &amp; Equinox (2); Blink of an Eye</p>              |
| <p><b>despite having respect for the local culture, do not excuse lack of responsibility on the part of local colleagues for furthering assignment goals</b></p>    | <p>Chakotay; Tuvok; Distant Origin; Think Tank</p>   |
| <p><b>know that values, appropriate behaviours, and appearances (attire etc.) vary from culture to culture and that every culture is valid in its own right</b></p> | <p>All members; Distant Origin; Future's End (1) &amp; Future's End (2); Mortal Coil; The Omega Directive; Gravity; Blink of an Eye</p>  |
| <p><b>can articulate the concept of culture, what it is, and its pervasive influence</b></p>  | <p>Kathryn Janeway; Deathwish; Future's End (1) &amp; Future's End (2); Distant Origin; Scorpion (1) &amp; Scorpion (2); Mortal Coil; Retrospect; The Killing Game (1) &amp; The Killing Game (2); The Omega Directive; Blink of an Eye; Lineage</p> |
| <p><b>know that all cultures have their own internal logic</b></p>  | <p>Tuvok; Deathwish; Distant Origin; Year of Hell (1) &amp; Year of Hell (2); Mortal Coil; The Omega Directive; Gravity; Blink of an Eye</p>   |
| <p><b>articulate how they are a product of their own culture</b></p>  | <p>Tuvok; Mortal Coil; Retrospect; The Killing Game (1) &amp; The Killing Game (2); The Omega Directive; Gravity; Blink of an Eye</p>  |
| <p><b>describe how some values of their own culture could cause interpersonal problems on the job in some countries</b></p>   | <p>Tuvok; Janeway; B'Elanna Torres; Future's End (1) &amp; Future's End (2); Mortal Coil; Retrospect; The Killing Game (1) &amp; The Killing Game (2); The Omega Directive; Gravity; Blink of an Eye; Lineage</p>                                    |

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| <b>describe how their own personal values might have to be tempered when abroad (e.g. a strong feminist may have to be careful about expressing her beliefs in some societies)</b> | Tuvok; Kathryn Janeway; Deathwish; Future's End (1) & Future's End (2); The Omega Directive; Blink of an Eye  |
| <b>can identify what they need to know about the host country in order to enhance personal satisfaction and professional effectiveness</b>   | Neelix; Doctor; Future's End (1) & Future's End (2); Gravity; Blink of an Eye   |
| <b>exhibit curiosity about and invest time in learning more about the host culture, both experientially and through research</b>   | Seven of Nine; Tom Paris; Doctor; All members; Deathwish; Flashback; Future's End (1) & Future's End (2); Scorpion (1) & Scorpion (2); The Raven; Year of Hell (1) & Year of Hell (2); Mortal Coil; The Killing Game (1) & The Killing Game (2); Gravity; Blink of an Eye |
| <b>demonstrate techniques for learning more about a culture</b>  | Neelix; Doctor; Deathwish; Basics (1) & Basics (2); Flashback; Future's End (1) & Future's End (2); Scorpion (1) & Scorpion (2); The Raven; The Killing Game (1) & The Killing Game (2); Gravity; Think Tank; Blink of an Eye   |
| <b>describe the core values of the local culture, with respect to gender, class, authority, religion etc.</b>  | Neelix; Future's End (1) & Future's End (2); Scorpion (1) & Scorpion (2); The Omega Directive; Blink of an Eye  |
| <b>describe how the history, mores, and socio-economic conditions of the country might affect the achievement of the assignment</b>  | Neelix; Future's End (1) & Future's End (2); Year of Hell (1) & Year of Hell (2); Blink of an Eye   |
| <b>score at least 8 out of 10 on a factual quiz about the host country</b>   | Neelix; Tom Paris; Doctor; Future's End (1) & Future's End (2); Scorpion (1) & Scorpion (2); Blink of an Eye  |
| <b>give examples of the diversity of the host culture</b>  | Doctor; Eye of the Needle; Future's End (1) & Future's End (2)  |
| <b>empathize with the host culture (i.e. have a feel for things)</b>   | Kathryn Janeway; All members; Future's End (1) & Future's End (2); Equinox (1) & Equinox (2); Blink of an Eye   |

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| <b>describe local management practices such as the typical authority structure, incentives and sanctions used, as well as policy making and implementation</b>                   | All members; Basics (1) & Basics (2); Future's End (1) & Future's End (2); Distant Origin; Scorpion (1) & Scorpion (2); Year of Hell (1) & Year of Hell (2); Blink of an Eye  |
| <b>describe the socio-economic factors operating in the environment of the host organization (e.g. the climatic and world trade background for an agricultural organization)</b> | All members; Basics (1) & Basics (2); Future's End (1) & Future's End (2); Blink of an Eye  |
| <b>socialize with host nationals individually and at the community level</b>   | All members; Future's End (1) & Future's End (2); Scorpion (1) & Scorpion (2); Blink of an Eye; Lineage   |
| <b>show a capacity to initiate conversations in cross-cultural situations</b>  | All members; Flashback, Future's End (1) & Future's End (2); Year of Hell (1) & Year of Hell (2); Gravity; Think Tank; Equinox (1) & Equinox (2); Blink of an Eye   |
| <b>win the confidence and trust of local people</b>  | All members; Basics (1) & Basics (2); Future's End (1) & Future's End (2); Year of Hell (1) & Year of Hell (2); The Killing Game (1) & The Killing Game (2); Gravity; Think Tank; The Voyager Conspiracy; Blink of an Eye; Lineage; Endgame (1) & Endgame (2) |
| <b>understand the differences and similarities between the rules of socializing in their home country and in the host country</b>  | Kathryn Janeway; all members; Future's End (1) & Future's End (2)   |
| <b>are cognizant of any negative images of foreigners in the local culture and try to avoid behaving according to these stereotypes</b>  | Seven of Nine; B'Elanna; Future's End (1) & Future's End (2); The Raven; The Killing Game (1) & The Killing Game (2); Gravity; Equinox (1) & Equinox (2); Blink of an Eye; Lineage  |
| <b>are sensitive to how an expatriate born in the host country and now a citizen of another country may be viewed by local staff</b>   | Seven of Nine; Neelix; B'Elanna Torres; Tom Paris; Future's End (1) & Future's End (2); The Raven   |

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| <p><b>work to develop an approach and climate conducive to task-achievement</b></p>   | <p>Kathryn Janeway; Chakotay; Caretaker (1) and Caretaker (2); Deadlock; Worst Case Scenario; Year of Hell (1) &amp; Year of Hell (2); The Omega Directive; Gravity; Think Tank; Equinox (1) &amp; Equinox (2); Endgame (1) &amp; Endgame (2)</p>   |
| <p><b>possess leadership or team-work skills</b></p>  | <p>Kathryn Janeway and Chakotay; all operations crew members; Caretaker (1) and Caretaker (2); Deadlock; Distant Origin; Worst Case Scenario; Scorpion (1) &amp; Scorpion (2); Year of Hell (1) &amp; Year of Hell (2); The Killing Game (1) &amp; The Killing Game (2); The Omega Directive; Gravity; Think Tank; Equinox (1) &amp; Equinox (2); Endgame (1) &amp; Endgame (2)</p> |
| <p><b>a knowledge of “self”, in terms of core values, beliefs, and the support systems needed to live contentedly in the new culture, that helps to “anchor” a person living in another culture</b></p>                           | <p>Tuvok; B’Elanna; Deathwish; Flashback; Gravity; Equinox (1) &amp; Equinox (2); Lineage</p>   |
| <p><b>insight into the sources of their cultural conditioning, but are also able to challenge that programming or at least be more accepting of someone else’s programming</b></p>  | <p>Seven of Nine; B’Elanna; Future's End (1) &amp; Future's End (2); Scorpion (1) &amp; Scorpion (2); The Raven; Mortal Coil; The Omega Directive; Gravity; Lineage</p>   |
| <p><b>can identify what gives them personal and professional satisfaction and dissatisfaction and why</b></p>   | <p>Tom Paris; Harry Kim; B’Elanna; Alter Ego; Real Life; Mortal Coil; The Omega Directive; Gravity; Equinox (1) &amp; Equinox (2); Lineage</p>  |
| <p><b>have learned to deal with their own emotional reactions to discomfoting behaviours in other cultures, including physical manifestations (e.g. unease at standing at a different proximity than what one is used to)</b></p> | <p>Seven of Nine; B’Elanna Torres; Tuvok; Flashback; The Raven; Retrospect; Lineage</p>   |
| <p><b>know that they are a source of ambiguity to others in an intercultural situation (i.e. that locals may find them hard to understand)</b></p>  | <p>Doctor; Seven of Nine; Tuvok; Flashback; The Raven; The Omega Directive; Gravity; Equinox (1) &amp; Equinox (2); Blink of an Eye</p>   |

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| <b>work to manage situations of ambiguity</b>   | Kathryn Janeway; Future's End (1) & Future's End (2); Worst Case Scenario; The Omega Directive; Gravity; Equinox (1) & Equinox (2); Blink of an Eye   |
| <b>can articulate their styles and the work implications</b>  | Seven of Nine; Kathryn Janeway; The Omega Directive   |
| <b>have strategies to increase the probability of compatibility with co-workers despite different natural management styles</b>   | Kathryn Janeway; Chakotay; Caretaker (1) and Caretaker (2); The Raven; Mortal Coil; The Omega Directive; Lineage  |
| <b>articulate the elements of a model of interpersonal communication, including verbal and non-verbal aspects of interpersonal and especially intercultural communication</b> | Doctor; Eye of the Needle; The Raven  |
| <b>state the main differences and similarities between the typical communication styles of their own culture and the host culture</b>   | Tuvok; Flashback; Scorpion (1) & Scorpion (2); The Raven  |
| <b>assess and sensitively resolve differing expectations of how foreigners and host nationals perceive their roles</b>  | Kathryn Janeway; Deathwish; The Killing Game (1) & The Killing Game (2); Blink of an Eye  |
| <b>demonstrate a willingness to engage in meaningful communication with host nationals without having an undue fear of making mistakes</b>                                    | Tuvok; Tom Paris; Harry Kim; Future's End (1) & Future's End (2); Distant Origin; Scorpion (1) & Scorpion (2); Year of Hell (1) & Year of Hell (2); The Killing Game (1) & The Killing Game (2); Think Tank; Equinox (1) & Equinox (2); Blink of an Eye |
| <b>are able to participate in local community activities without fully understanding the purpose, meaning, or their expected role as viewed by host nationals</b>             | All members; Mortal Coil  |
| <b>attempt to enhance communication by avoiding any stereotypical presumptions about how local people would understand what is being said</b>                                 | All members; Basics (1) & Basics (2); Year of Hell (1) & Year of Hell (2); Nothing Human; Equinox (1) & Equinox (2); Blink of an Eye  |

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| <b>can identify both the values that foreign workers and local colleagues share and those they don't share</b>   | Seven of Nine; Future's End (1) & Future's End (2); Distant Origin; Scorpion (1) & Scorpion (2); Year of Hell (1) & Year of Hell (2); Gravity; Equinox (1) & Equinox (2)  |
| <b>have effective listening and observational skills</b>   | All members; Basics (1) & Basics (2); The Darkling; Future's End (1) & Future's End (2); Distant Origin; Year of Hell (1) & Year of Hell (2); Retrospect; Gravity; Equinox (1) & Equinox (2); The Voyager Conspiracy; Blink of an Eye |
| <b>possess strategies for resolving an intercultural impasse and miscommunication</b>  | Kathryn Janeway; Future's End (1) & Future's End (2); Retrospect; The Killing Game (1) & The Killing Game (2); Equinox (1) & Equinox (2); The Voyager Conspiracy; Blink of an Eye; Lineage  |
| <b>develop a growing language capacity over the course of the sojourn</b>  | Seven of Nine; Neelix; Doctor; Nothing Human; Gravity; Equinox (1) & Equinox (2); Blink of an Eye   |
| <b>accurately describe local people's rationales for doing and proposing things (not necessarily agreeing with them, just understanding and respecting their views)</b>  | Tuvok; Seven of Nine; Kathryn Janeway; Doctor; Future's End (1) & Future's End (2); Year of Hell (1) & Year of Hell (2); Blink of an Eye  |
| <b>articulate how expatriates in general, as well as those from one's own country, are perceived by locals</b>   | Doctor; Neelix; B'Elanna; Eye of the Needle; Equinox (1) & Equinox (2); Lineage   |
| <b>experiment with, but do not necessarily permanently adopt, local mannerisms and means of communication</b>  | Seven of Nine; Doctor; Future's End (1) & Future's End (2); The Raven; Blink of an Eye  |
| <b>theoretically and sympathetically "try on" the local worldview so that they can appreciate its logic although not necessarily agreeing with it (e.g. can entertain thoughts such as "if I were in this person's shoes, I would think or do this")</b> | Seven of Nine; Doctor; Future's End (1) & Future's End (2); Mortal Coil; Nothing Human; Blink of an Eye   |

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| <p><b>able to adopt behaviours that are crucial to achieving results in the host organization or culture</b></p>                                    | <p>Seven of Nine; Neelix; Future's End (1) &amp; Future's End (2); Scorpion (1) &amp; Scorpion (2); Year of Hell (1) &amp; Year of Hell (2); Equinox (1) &amp; Equinox (2); Blink of an Eye; Lineage; Endgame (1) &amp; Endgame (2) Endgame (1) &amp; Endgame (2)</p>  |
| <p><b>identify key stakeholders involved in and affected by the assignment</b></p>  | <p>Kathryn Janeway; All members; Deadlock; Future's End (1) &amp; Future's End (2); Scorpion (1) &amp; Scorpion (2); Year of Hell (1) &amp; Year of Hell (2); Retrospect; Think Tank; Equinox (1) &amp; Equinox (2); Blink of an Eye; Endgame (1) &amp; Endgame (2)</p>  |
| <p><b>analyze the needs, motivations, and level of involvement of stakeholders</b></p>  | <p>All members; Deathwish; Basics (1) &amp; Basics (2); Distant Origin; Scorpion (1) &amp; Scorpion (2); Year of Hell (1) &amp; Year of Hell (2); Retrospect; The Killing Game (1) &amp; The Killing Game (2); Think Tank; Equinox (1) &amp; Equinox (2); Blink of an Eye; Endgame (1) &amp; Endgame (2)</p>       |
| <p><b>promote the establishment of an organization that has processes, systems and values in harmony with the values of its member cultures</b></p> | <p>Kathryn Janeway; Chakotay; Basics (1) &amp; Basics (2); Scorpion (1) &amp; Scorpion (2); Retrospect; The Omega Directive; Nothing Human; Equinox (1) &amp; Equinox (2); Lineage</p>   |
| <p><b>encourage discussion of problems and solutions between locals and foreigners, without violating local practices in these areas</b></p>        | <p>Kathryn Janeway; Chakotay; Future's End (1) &amp; Future's End (2); Year of Hell (1) &amp; Year of Hell (2); The Omega Directive; Think Tank; Equinox (1) &amp; Equinox (2); Blink of an Eye; Endgame (1) &amp; Endgame (2)</p>   |
| <p><b>are patient in their approach to bringing about reconciliation, as well as in pushing for organizational change</b></p>                       | <p>Kathryn Janeway; Chakotay; Deathwish; Distant Origin; Scorpion (1) &amp; Scorpion (2); The Raven; Year of Hell (1) &amp; Year of Hell (2); Retrospect; The Killing Game (1) &amp; The Killing Game (2); Nothing Human; Equinox (1) &amp; Equinox (2); The Voyager Conspiracy; Endgame (1) &amp; Endgame (2)</p> |
| <p><b>are approached by local colleagues voluntarily to seek advice and</b></p>   | <p>Kathryn Janeway; Chakotay; The Raven; Year of Hell (1) &amp; Year of Hell (2); Mortal Coil; The Omega Directive; Equinox (1) &amp;</p>  |

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| <b>exchange ideas on how to pursue work objectives</b>   | Equinox (2); Blink of an Eye; Endgame (1) & Endgame (2)   |
| <b>give advice and direction to local colleagues in a way that does not offend local cultural sensitivities and authority structures</b>   | Kathryn Janeway; Chakotay; Basics (1) & Basics (2); Future's End (1) & Future's End (2); Scorpion (1) & Scorpion (2); Think Tank; The Voyager Conspiracy; Blink of an Eye; Lineage; Endgame (1) & Endgame (2)   |
| <b>have a vision of where the assignment should be going in the future</b>   | All members; The Raven; Year of Hell (1) & Year of Hell (2); The Omega Directive; Equinox (1) & Equinox (2); Endgame (1) & Endgame (2)  |
| <b>persevere in advancing the larger purposes of the assignment (e.g. sustainable development, transfer of knowledge and skills, diplomacy, peacekeeping, business operations)</b> | All members; Caretaker (1) and Caretaker (2); Deathwish; Deadlock; Real Life; Scorpion (1) & Scorpion (2); The Raven; Year of Hell (1) & Year of Hell (2); The Omega Directive; Equinox (1) & Equinox (2); Blink of an Eye; Endgame (1) & Endgame (2)   |
| <b>while maintaining cultural sensitivity and interpersonal tact, do not abdicate their management responsibilities</b>  | Kathryn Janeway; Chakotay; Flashback; Future's End (1) & Future's End (2); Worst Case Scenario; Scorpion (1) & Scorpion (2); The Raven; Year of Hell (1) & Year of Hell (2); Retrospect; The Killing Game (1) & The Killing Game (2); The Omega Directive; Nothing Human; Equinox (1) & Equinox (2); The Voyager Conspiracy; Lineage; Endgame (1) & Endgame (2) |
| <b>weigh carefully the various considerations raised by co-workers and stakeholders and avoid impulsive decisions about how to achieve the assignment's goal</b>                   | Kathryn Janeway; Caretaker (1) and Caretaker (2); Deathwish; Deadlock; Real Life; Scorpion (1) & Scorpion (2); The Raven; Year of Hell (1) & Year of Hell (2); Retrospect; The Omega Directive; Nothing Human; Equinox (1) & Equinox (2); The Voyager Conspiracy; Endgame (1) & Endgame (2)   |
| <b>keen observers of sometimes subtle changes in power relations between people and institutions</b>   | Kathryn Janeway; Chakotay; Tuvok; Doctor; Year of Hell (1) & Year of Hell (2); Equinox (1) & Equinox (2)  |

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| <p><b>adapt the original plan of operation to fit the realities of available technologies and resources in the field</b></p>   | <p>All members; Caretaker (1) and Caretaker (2); Basics (1) &amp; Basics (2); Scorpion (1) &amp; Scorpion (2); The Raven; Year of Hell (1) &amp; Year of Hell (2); The Omega Directive; Equinox (1) &amp; Equinox (2); Endgame (1) &amp; Endgame (2)</p>   |
| <p><b>are innovative in finding ways to achieve the same result with less (or more) sophisticated technologies (e.g. they can find a way to repair imported machinery using locally available materials)</b></p> | <p>All members; Caretaker (1) and Caretaker (2); Basics (1) &amp; Basics (2); Real Life; Scorpion (1) &amp; Scorpion (2); The Raven; Year of Hell (1) &amp; Year of Hell (2); The Killing Game (1) &amp; The Killing Game (2); The Omega Directive; Gravity; Equinox (1) &amp; Equinox (2); Lineage; Endgame (1) &amp; Endgame (2)</p> |
| <p><b>acknowledged by local colleagues as having motivations that go beyond personal career advancement and monetary gain</b></p>  | <p>All members; Deathwish; Deadlock; Distant Origin; Worst Case Scenario; Year of Hell (1) &amp; Year of Hell (2); Retrospect; The Killing Game (1) &amp; The Killing Game (2); Equinox (1) &amp; Equinox (2); Lineage; Endgame (1) &amp; Endgame (2)</p>  |
| <p><b>list clearly and prioritize personal and professional expectations of the assignment and life in the host country</b></p>  | <p>Doctor; Tom Paris; B'Elanna Torres; Seven of Nine; All members; Eye of the Needle; The Darkling; Real Life; Worst Case Scenario; Equinox (1) &amp; Equinox (2); Lineage; Endgame (1) &amp; Endgame (2)</p>  |
| <p><b>describe any gaps that exist between personal and professional needs and expectations and realities on the ground (e.g. the original expectations may face logistical difficulties)</b></p>                | <p>Doctor; Tom Paris; B'Elanna Torres; Seven of Nine; All members; Eye of the Needle; The Darkling; Real Life; Scorpion (1) &amp; Scorpion (2); Year of Hell (1) &amp; Year of Hell (2); Nothing Human; Equinox (1) &amp; Equinox (2); Endgame (1) &amp; Endgame (2)</p>   |
| <p><b>reassess and revise expectations in the face of unforeseen realities</b></p>   | <p>Tom Paris; B'Elanna Torres; Seven of Nine; All members; Caretaker (1) and Caretaker (2); Eye of the Needle; Basics (1) &amp; Basics (2); Real Life; Scorpion (1) &amp; Scorpion (2); Year of Hell (1) &amp; Year of Hell (2); Equinox (1) &amp; Equinox (2); Lineage; Endgame (1) &amp; Endgame (2)</p>                             |

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| <b>describe expectations upon repatriation (i.e. what will the assignment lead to)</b> | All speak of their return to the Alpha Quadrant and what they expect along the episodes; Eye of the Needle; Eye of the Needle; Equinox (1) & Equinox (2); Lineage; Endgame (1) & Endgame (2) |
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We also want to stress that all the fears and healthy paranoia of SF seem to have a place in STVOY:

- the showing of unpredictable consequences of technological advancements, such as the initial moment when Voyager and its crew, together with the Maquis are sent to such a distance that by the time the ship returns home the crew will have changed in many ways, or the episode “Blink of an Eye”,
- of us being rendered dispensable by other species, as Voyager encounters the Vidiians, Species 8472, the Borg or the Hirogen,
- of the survival in existential loneliness, as Neelix feels for most of the series in a way for being the last of his species (in the last episodes he finds out that this is not true),
- of already being part of a growing wrong and not noticing it yet or ever, as happens with the drone mentality of the Borg.

It fought this with the humanistic ideal of respect for others and their choices. It allowed for distancing to permit bringing up matters that happen right here. Among these matters were gender equality, racism, xenophobia or colonization. While giving hope to many about being in a power position, as they could see themselves represented in these mix-racial crews with women not needing help of men to do their jobs and talking of matters that did not involve love relationships, putting in action what Luc Besson said that “by definition, the future does not have a limit” (Cameron, 2018).

In STVOY, following the long Star Trek tradition, it is not one (man) that does the difference but several people, together, varying in the abilities put forth. It alerts us not to go into certain situations lightly, even not to go into them again, by showing how small variables can bring us either to a no turning point or to a new, hopeful, empathic society. To learn in each agile cycle.

We propose that by connecting ideas from an agile work environment with ideas of what may constitute an interculturally effective person allows us to defend that intercultural learning can be improved with a “learning on the go” approach.

SF and particularly STVOY is used as case study for a work environment where interculturality plays a key role and where the agile work environment is put to the test.

If you consider that you are only a fluent IEP when you are so under duress, instead of pretending that being IEP is something natural to some and unnatural to others, accept that it is a continuous process that requires feedback, self-organization, transparency, a focus on the customer and continuous learning. Also, the refactoring of one’s beliefs, not just seeking new features for oneself. To clean one’s own system to allow for new parts to come in focus, as skills can be found not just in the new input of information but also in the constant interaction and research with our environment.

#### 3.2.4. Selection Methodology

The document “Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement”, by David Moher et al (2009) has been used as a basis for the selection of the episodes to view within this work.

We will show first the flow diagram that served as model, and then the flow diagram created for the STVOY analysis.

For selection of episodes we have read a short description for all episodes, took into consideration ratings from fan bases (Trek Ranks, IMDB, Ranker) and selected those that contained or could be prone to question at least one of the following: doing business, gender equality, racism, xenophobia or colonization.

##### 3.2.4.1. PRISMA 2009 Flow Diagram

Figure 1 is the flow diagram created by Moher, Liberati, Tetzlaff and Altman (2009), which we used as basis for the selection of episodes from STVOY for study.

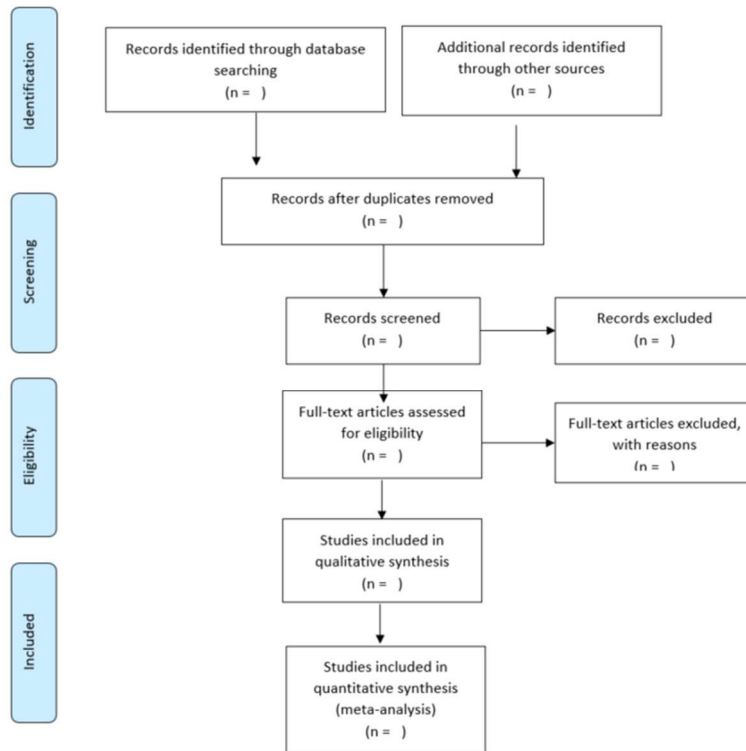


Figure 1 - PRISMA 2009 Flow Diagram, by Moher et al. (2009).

### 3.2.4.2. Using PRISMA 2009 ADAPTED Flow Diagram for STVOY analysis

Adapting the flow diagram included in figure 1 above for STVOY analysis resulted in the following:

#### Identification

EPISODES identified through database searching (n = 172)

Additional EPISODES identified through other sources (n = 0)

EPISODES after duplicates removed (n = 172)

#### Screening

EPISODES screened (n = 172)

EPISODES excluded (n = 118)

#### Eligibility

Full EPISODES assessed for eligibility (n = 54)

Full EPISODES excluded, with reasons (n = 19)

**Included**

EPISODES included in qualitative synthesis (n = 35)

EPISODES included in quantitative synthesis (meta-analysis) (n = 0)

## **Chapter IV – Conclusion**

As a last chapter, we have defined as necessary to remember the goals of this work, give a sense of what we perceive as the findings, but also speak of the limitations encountered and future research we believe can be of use in the field.

The work started, in Chapter I, with a question on what constitutes an Interculturally Effective Person, why this may be of growing importance in general and in particular in the field of business and how it can be achieved in a harmonious way that respects the experimental nature intercultural effectiveness growth. This was a chapter where the literature researched was chosen with the help of the knowledge acquired during the master degree in Intercultural Studies. Choosing the authors was influenced by conclusions acquired during the master degree on what may constitute an Interculturally Effective Person.

Then, in Chapter II, we explored work frameworks that have respect and diversity in opinions in their core characteristics, valuing also the experimental nature of human learning. Aside from being frameworks currently becoming widespread in business, our choice had more to do with the recognition that they are themselves effective and possess an underlying respectfulness for diversity and creativity. These frameworks trust learning and do not fear failing. They embrace it and use it for improvement. They follow a similar model as the one described in Chapter I.

Afterwards, in Chapter III, we searched an example, not found in reality, but one found in a field that has influenced reality and is influenced by it for centuries, which is Science Fiction. The example, Star Trek Voyager is a case that connects with several points made along the first two chapters, as it is set in a VUCA world, where an intercultural team is looking to bring a project (returning to Earth) to a good end, while being respectful of other species it encounters and learning from them. Their leader does not follow a command and control model but a feedback, constant learning, and transparent model of management. Respect and diversity is at the core of the example. The more they learn and experiment, the more this team of people become effective. They use intercultural effectiveness for their benefit. Other species and crews encountered, by lack of respect, by lack of transparency, by seeking to win instead of to share victories, become less effective. The dire the moments, the faster they are able to reorganize, act and adapt, trusting each other to do their best.

Along the work, we have found that there is a place and a need for interculturally effective people in business. To enhance the benefits of intercultural relations in business, agility driven environments allow for focus on the need of the client (be it internal or external), transparency, constant learning and self-organization, therefore feeding on the natural characteristics of those intercultural relations and feeding back to them. A mutually beneficial relation builds between intercultural relations and agility driven environments.

We were then able to define our “What”, “So what” and “Now what” questions, that is, what these things are and how they connect and the benefit that derives from that connection becoming evident.

This work could be, in our opinion, helpful for research in the field of intercultural effectiveness in business connected with agility driven frameworks, looking to improve these relations within and also towards the outside of themselves. This needed transformation may make use of the example, refocusing and changing the typology of teams, bringing individual differences to teams for creative solutions.

Limiting the work done was the evident theoretical basis. Even with a case study, the real-life study seems the next logical call, as a need for real-life proof of results. In addition, we believe the case study could be stronger if the episodes were chosen and viewed by groups of people, who would then share results. As we speak of diversity, the results would surely be more valuable if diversity was included and respected in those groups. Our Science Fiction example is a strong tool for awareness but it derives also from the view/views of specific people and their interpretation of possible realities. It was built in a specific culture at a specific time. It is a strong example, but still it is only one.

Research could also take the direction of an experimental project within a team in a company using the frameworks described, where results could be accompanied and crossed with results from teams not using them, and further comparing the intercultural influence for the returns on the team.

We realize the topic does not allow for a full conclusion but we hope to have provided some conclusions along the work through our considerations.



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