

Improving empathy: is virtual reality an effective approach to educating about refugees?

A study on whether virtual reality can foster empathy towards refugee issues among young students

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Abstract

Prompted by the need to educate host communities about refugees as a way to promote a two-way process of integration, this dissertation is an empirical investigation into the use of virtual reality in the context of education about refugees. In particular, it focuses on the question of whether virtual reality could effectively foster empathy towards refugees. The emphasis on empathy is motivated by two main reasons: first, empathy can be taught and, second, it can lead to altruism. Inspired by the success of the 360-degree video *Clouds Over Sidra*, which helped virtual reality earn the title of 'empathy machine', this study asked 107 middle and high school students to watch the above-mentioned *Clouds Over Sidra* and the multimodal video *Step into a Refugee Camp* and compare the two media experiences. Overall, the results indicated VR's immersive quality can enhance compelling content by eliciting both emotional and cognitive empathy and help develop perspective-taking capacities. They also demonstrated that, at least in the short term, the empathic reaction stimulated some forms of altruism expressed in the commitment to offer a personal contribution to improve the refugees' situation.

Keywords

education, two-way integration, empathy, virtual reality, altruism, responsibility, refugees

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1. Introduction

This paper seeks to explore the effectiveness of virtual reality¹ in fostering empathy towards refugees in the school environment. In order to achieve this objective, a study was conducted in which 107 middle and high school students were asked about their understanding of refugee issues and invited to compare two media experiences: the 360-degree video *Clouds Over Sidra*² and the multimodal video *Step into a Refugee Camp*.³

The choice to focus on how to elicit empathy was first triggered by President Obama's statement: '[t]he biggest deficit that we have in our society and in the world right now is an empathy deficit'.⁴ This observation was later substantiated by a 2011 study of American college students which discovered a decrease in empathy over the last 30 years.⁵ Given that the presence of refugees is increasingly fuelling tension and fear into receiving societies,⁶ this is a cause of significant concern. As leading researchers such as Batson have shown, empathy is capable of improving societal attitudes towards stigmatised groups.⁷ Hence, it could contribute to changing today's hostile climate towards refugees and perhaps even create a more open mindset towards them.

Just as empathy can decrease (e.g. the current 'deficit') it can also increase.⁸ This possibility supports the core of this paper, which aims to investigate innovative ways to stimulate empathy. In this context, one medium was often cited especially for its effectiveness: VR, which in 2015 earned the grand title of 'the ultimate empathy machine'.⁹

While the term 'virtual reality' can imply different levels of immersion and manipulation of a virtual environment, here it refers to the immersive viewing experience created by 360-degree videos. These are normally filmed with a multi-lens camera or a collection of cameras. This allows filmmakers to shoot overlapping fields of view at the same time which are then stitched together in order to create videos offering a panoramic experience. These types of videos can be accessed with simple and affordable viewers equipped with lenses for immersive visuals which work with smartphones.¹⁰ Although these devices cannot track the viewers' movements, they nonetheless give them the feeling of being immersed in the scene they are seeing through 3D vision. In other words, their location remains fixed, but they can look all around and control where to explore and for how long.

360-degree videos became very popular in 2015, when YouTube made it possible to upload and view them on its platform. Media companies soon started paying attention to the potential of VR to engage their audience. New VR divisions were added to large organisations such as CNN, The New York Times Company and The Economist Group to name a few.¹¹ The UN too became part of this trend with the creation of United Nations Virtual Reality (UNVR) and the release of the eight-minute long 360-degree video used in this study: *Clouds Over Sidra*, a documentary about the life of a 12-year-old Syrian girl in the Za'atari camp in Jordan.¹² It premiered at the World Economic Forum in Davos, Switzerland, in January 2015.¹³ Since then it has been screened at several charity events in over 40 countries as it has turned out to be 'twice as effective in raising funds'.¹⁴

This effectiveness has been attributed to the immersive experience offered by VR which, by giving viewers the feeling of being present on the scene, can elicit empathy. Such a claim, however, remains hotly debated. Some researchers, including Jeremy Bailenson, the founding director of Stanford University's Virtual Human Interaction Lab, are convinced VR drives empathy. Others, however, remain sceptical and even question the desirability of fostering empathy in the first place.¹⁵

Given the positive impact VR could have in changing attitudes towards refugees, it seemed worthwhile to contribute to this debate by expanding the research on VR's effectiveness in eliciting empathy to refugee studies, in particular to the

1 Hereinafter 'VR'.

2 G Arora and C Milk, 'Clouds Over Sidra' (2015) WITHIN <<http://with.in/watch/clouds-over-sidra>> accessed 4 October 2019.

3 D Acosta, 'Step into a Refugee Camp' New York Times (New York, 30 December 2016) <<https://www.nytimes.com/2016/12/30/world/middleeast/syrian-refugees-on-the-war-their-camp-and-your-questions.html>> accessed 4 October 2019.

4 Cited by C S Dweck, K Schumann and J Zaki, 'Addressing the Empathy Deficit: Beliefs About the Malleability of Empathy Predict Effortful Responses When Empathy Is Challenging' (2014) 107(3) *Journal of Personality and Social Psychology* 475.

5 *ibid.*

6 See Ipsos, 'Global Views on Immigration and the Refugee Crisis' (2016) <<https://www.ipsos.com/sites/default/files/migrations/en-uk/files/Assets/Docs/Polls/ipsos-global-advisor-immigration-and-refugees-2016-charts.pdf>> accessed 4 October 2019.

7 C D Batson et al., 'Empathy, Attitudes and Action: Can Feeling for a Member of a Stigmatized Group Motivate One to Help the Group?' (2002) 28(12) *Personality and Social Psychology Bulletin* 1656.

8 Dweck, Schumann and Zaki (n 4).

9 C Milk, 'How Virtual Reality Can Create the Ultimate Empathy Machine' (2015) TED <https://www.ted.com/talks/chris_milk_how_virtual_reality_can_create_the_ultimate_empathy_machine?language=en> accessed 4 October 2019.

10 For this study, the viewer used was Google Cardboard <<https://vr.google.com/cardboard/>> accessed 4 October 2019.

11 See J Vincent, 'CNN Launches Global VR Journalism Unit and New 360-degree Mobile Content' *The Verge* (8 March 2017) <<https://www.theverge.com/2017/3/8/14852256/cnn-virtual-reality-vr-news-team>> accessed 4 October 2019.

12 United Nations Virtual Reality, 'Clouds Over Sidra' (2015) <<http://unvr.sdgactioncampaign.org/cloudsoversidra/>> accessed 4 October 2019.

13 *ibid.*

14 *ibid.*

15 S Illing, 'The Case Against Empathy' (20 August 2018) *Vox* <<https://www.vox.com/conversations/2017/1/19/14266230/empathy-morality-ethics-psychology-compassion-paul-bloom>> accessed 4 October 2019.

area of education about refugees. Its possible role in opening the minds of younger generations towards challenging issues such as welcoming refugees, combined with the little attention it has received so far in the academic discourse, makes it an ideal area to start an investigation.

In this context, education is not simply understood as a process of knowledge acquisition, rather as the transmission of skills and behaviours aimed at developing a responsible and ethical approach to complex social phenomena.¹⁶ One of these skills is empathy. The 2016 UNESCO report on global education emphasises that '[f]or education to truly be transformative, "education as usual" will not suffice...[L]earning needs to foster thinking that is more...empathic'.¹⁷

However, this paper does not propose to present a recipe for fostering empathy. Rather, it seeks to provide an analysis of how VR experiences can generate empathic feelings in order to support quality teaching and learning. Hence, the research questions this paper addresses are: can VR be effective in fostering empathy within the framework of education about refugees? If so, what are the elements contributing to this? And will empathy lead to action?

The relevancy and urgency of these questions is further highlighted by a general failure of schools to provide a space for intercultural dialogue.¹⁸ Unfortunately, this often results in predominant attitudes of discrimination, xenophobia and stereotyping standing in the way of integration, thereby denying refugee children an adequate learning environment.¹⁹ This is especially concerning given that the school is in many cases the place where different communities come into contact with one another and can engage in the process of a two-way integration based on the idea that both the host community and the newcomers should get to know each other.²⁰

Therefore, the meta-purpose of this paper²¹ revolves around the need to educate about refugees as a way to realise integration. Embracing the argument that:

[w]hile critique and elaboration of the theorization of integration processes is a key goal of the field of refugee studies, so too are means of making the insights of theory accessible to local actors and policy makers²²

this paper strives to be a useful piece of research for educators in helping them with their task of teaching about refugees. At the very least, it hopes to inspire a discussion on how to prepare young minds to integrate refugees into their communities.

16 G Cain and Y Carnellor, 'Roots of Empathy': A Research Study on its Impact on Teachers in Western Australia' (2008) 2(1) *Journal of Student Wellbeing* 52.

17 UNESCO, 'Global Education Monitoring Report' (2016) <<http://unesdoc.unesco.org/images/0024/002462/246230E.pdf>> accessed 4 October 2019.

18 Lifelong Learning Platform, 'Integrating Refugees and Migrants Through Education' (2016) <http://llplatform.eu/ll/wp-content/uploads/2016/09/llplatform_integration-through-education_position-paper.pdf> accessed 4 October 2019.

19 M Mendenhall, S Garnett Russell and E Buckner, 'Urban Refugee Education: Strengthening Policies and Practices for Access, Quality, and Inclusion Insights and Recommendations from a 16-Country Global Survey and Case Studies in Beirut, Nairobi, and Quito' (2017) <<https://www.tc.columbia.edu/refugeeeducation/resources/Urban-Refugees-Full-Report.pdf>> accessed 4 October 2019.

20 A Ager and A Strang, 'Refugee Integration: Emerging Trends and Remaining Agendas' (2010) 23(4) *Journal of Refugee Studies* 589.

21 A Schmidt, "'I Know What You're Doing" Reflexivity and Methods in Refugee Studies' (2007) 26(3) *Refugee Survey Quarterly* 82.

22 Ager and Strang, 'Refugee Integration: Emerging Trends and Remaining Agendas' (n 20).

2. Education about refugees, empathy and virtual reality: A literature review of these topics and how they interact

2.1 Education about refugees: Integration as a two-way process

According to the conceptual framework proposed by Ager and Strang to identify the main domains of integration, education appears together with housing, employment and health as one of the four markers and means of integration. These are markers because successful outcomes in these areas indicate a certain level of integration. At the same time, they are means because they have the potential to lead to the achievement of integration.²³

This study, however, proposes to explore the concepts of integration, education and refugees from a different angle. Instead of focusing on educating refugees, it revolves around the idea of educating receiving communities about refugees as a means of advancing integration. Consequently, integration is understood as a two-way process or more precisely as 'a process of mutual accommodation and adjustment by both newcomers and the larger society.'²⁴ Within the realm of education, this translates into ensuring refugees familiarise themselves with their host society while the latter makes an effort to get to know its new members.

Integration as a two-way process was first introduced by the Council of Europe, which in 1998 stated: '(Integration is)... a two way process (whereby) immigrants change society at the same time as they integrate into it.'²⁵ Subsequently, it was explored by several authoritative scholars such as Ager and Strang.²⁶ Their latest paper on the topic, 'Refugee Integration: Emerging Trends and Remaining Agendas',²⁷ appeared in the 2010 special issue on integration of the *Journal of Refugee Studies*. This article, along with several others published in the same issue, shows support for the argument that the receiving community is also called upon to learn about the refugees living in their midst for integration to be successful.²⁸

While this notion is met with consensus in the academic world, it does not reflect how the public perceives integration. As Castle et al. illustrate, both popular attitudes and policies tend to see integration as a one-way process based on the assumption it is the refugees' responsibility to adjust.²⁹ Analysing the situation in Britain, Zetter et al. make a comparable argument by underlining how integration rhetoric often translates into assimilation policies.³⁰ Along similar lines, Vasta points out the two-way concept is missing the part where 'the dominant, established groups also take the responsibility to integrate into an ethnically and culturally diverse society'.³¹

2.1.1 Education as intercultural dialogue

Educational programmes aimed at integration were initially focused on increasing young refugees' opportunities to enter the labour market.³² While this approach contributed to their economic integration, it failed to address the cultural component of integration, thus leaving newcomers as the only party responsible for adapting to the new society.³³

However, as schools were increasingly identified as forums to encourage the process of socialisation between the host community and the newcomers,³⁴ attention started being paid to 'the importance of dialogue and exchange about both the host culture and the culture and history of the other community'.³⁵ Hence, at the beginning of the 21st century, a new educational trend based on the principle of intercultural dialogue began to take shape in response to the growing diversity introduced by migration into Western societies. A few papers commissioned by European

23 Ager and A Strang, 'Understanding Integration: A Conceptual Framework' (2008) 21(2) *Journal of Refugee Studies* 166.

24 The 2010–2011 report by Citizenship and Immigration Canada on Plans and Priorities for Citizenship and Immigration Canada (2010) <<http://www.unhcr.org/52403d389.pdf>> accessed 4 October 2019.

25 Cited by Ager and Strang, 'Refugee Integration: Emerging Trends and Remaining Agendas' (n 20) 602.

26 See Ager and A Strang, 'Indicators of Integration: Final Report' (2004) Home Office Development and Practice Report 28 <<http://webarchive.nationalarchives.gov.uk/20110218141321/http://rds.homeoffice.gov.uk/rds/pdfs/04/dpr28.pdf>> accessed 4 October 2019, Ager and Strang, 'Understanding Integration: A Conceptual Framework' (n 23) and Ager and Strang, 'Refugee Integration: Emerging Trends and Remaining Agendas' (n 20).

27 Ager and Strang, 'Refugee Integration: Emerging Trends and Remaining Agendas' (n 20) 600.

28 See for instance M McKeary and B Newbold, 'Barriers to Care: The Challenges for Canadian Refugees and their Health Care Providers' (2010) 23(4) *Journal of Refugee Studies* 523 and G Mulvey, 'When Policy Creates Politics: The Problematizing of Immigration and the Consequences for Refugee Integration in the UK' (2010) 23(4) *Journal of Refugee Studies* 437.

29 S Castles, M Korac, E Vasta and S Vertovec, 'Integration: Mapping the Field' Report of a project carried out by the Centre for Migration and Policy Research and Refugee Studies Centre (University of Oxford 2002) 113.

30 R Zetter, D Griffiths and N Sigona, 'Immigration, Social Cohesion and Social Capital: What Are the Links?' (2006) <<https://www.jrf.org.uk/report/immigration-social-cohesion-and-social-capital-what-are-links>> accessed 4 October 2019.

31 E Vasta, 'The Controllability of Difference: Social Solidarity and Immigrant Integration' (2009) COMPAS Working Paper 71, 19.

32 D Faas, C Hadjisoteriou and P Angelides, 'Intercultural Education in Europe: Policies, Practices and Trends' (2014) 40(2) *British Educational Research Journal* 313.

33 Vasta (n 31) 19.

34 Faas, Hadjisoteriou and Angelides (n 32) 310. See also Ager and Strang, 'Refugee Integration: Emerging Trends and Remaining Agendas' (n 20).

35 Faas, Hadjisoteriou and Angelides (n 32) 312.

institutions such as the Council of Europe,³⁶ but also by global organisations such as UNESCO,³⁷ promoted intercultural education as the tool to achieve balance between cultural diversity and social cohesion.³⁸ 2008 was even proclaimed the year of intercultural dialogue and programmes such as ‘intercultural cities’ were launched.³⁹ All these initiatives brought about a most remarkable ‘shift...in the statement that culturally diverse society, and intercultural and multicultural education is for all students, not only for minority and immigrant students.’⁴⁰

While intercultural education has the potential to contribute to the realisation of integration as a two-way process, the real issue is that it has been only marginally implemented into national school curricula. The 2008 study, ‘Intercultural Education in Schools’, carried out by the European Parliament reported ‘little engagement in implementing European policies on intercultural education’ in school programmes which have continued to reflect a national and mono-cultural way of thinking.⁴¹ Beyond Europe, a 2016 global report by UNESCO based on 78 countries around the world found that only 50 per cent of them included concepts such as intercultural education in their school curricula.⁴²

Despite this failure to embed intercultural education into national school programmes, the idea of advancing integration through the education of host communities about refugees still finds support, at least in the academic world. In 2017, for instance, the journal *Intercultural Education*, a global forum for education in plural societies, dedicated an entire issue to the subject of teaching about refugees.⁴³ In her editorial, Nenadovic refers to recent political events, such as Brexit and the election of Donald Trump, as signs of rising populism and consequent lack of willingness to move towards solutions of integration.⁴⁴ This increasingly hostile climate has been fuelling already existing concerns about the presumed incompatibility of the refugees’ cultures and religions with those of the receiving countries. These have provided the motivation to address the need to educate host communities about refugees. Although exploring different realities in different countries, all articles come to the same conclusion as to the urgency of starting to insert more refugee-related topics into the Western educational system.

However, while the subject of education about refugees has been broached in the discipline of education, it has not yet been tackled within refugee studies, where the focus has been on the relationship between integration and education of refugees. UNHCR has made a small contribution to the topic of educating about refugees with a web page entitled ‘Teaching About Refugees’.⁴⁵ This provides resources and toolkits for primary and secondary school teachers but is in part out-dated and only available in English. By switching the perspective from the refugees to the host communities, this paper aims to offer a fresh approach to the complex topic of integration while remaining aligned with the goal of refugee studies: to improve the lives of refugees.

2.2 Empathy

One of the skills required to engage effectively in intercultural dialogue is empathy, which, according to the document ‘Competences for Democratic Culture’ produced by the Council of Europe, can help ‘facilitate comprehension of the other person’s point of view.’⁴⁶ The same idea emerges from the special issue of *Intercultural Education* dedicated to teaching about refugees.⁴⁷

2.2.1 What is empathy?

In its broad definition, empathy is accepted as a phylogenetically ancient capacity that enables one to relate quickly and automatically to the emotional states of others.⁴⁸ According to De Waal, it can subsume different levels: from emotional contagion, through sympathetic concern or cognitive empathy – namely the ability to understand the other’s situation – to the highest level, that is, perspective-taking.⁴⁹ Zaki and Ochsner reiterate this concept by defining

36 For a comprehensive review of documents focused on intercultural education in Europe, see I Sikorskaya, ‘Intercultural Education Policies Across Europe as Responses to Cultural Diversity (2006–2016)’ (2017) Working Papers del Centro Studi Europei <<http://www.paperscse.unisa.it/autori/sikorskaya>> accessed 4 October 2019 and Faas, Hadjisoteriou and Angelides (n 32) 302.

37 See UNESCO, ‘Guidelines on Intercultural Education’ (2006) <<http://unesdoc.unesco.org/images/0014/001478/147878e.pdf>> accessed 4 October 2019 and UNESCO, ‘Investing in Cultural Diversity and Intercultural Dialogue’ (2009) <<http://unesdoc.unesco.org/images/0018/001852/185202e.pdf>> accessed 4 October 2019.

38 Faas, Hadjisoteriou and Angelides (n 32) 312.

39 Council of Europe, ‘Intercultural Cities Program’ <<https://www.coe.int/en/web/interculturalcities/home>> accessed 4 October 2019.

40 Sikorskaya (n 36) 17.

41 European Parliament, ‘Intercultural Education in Schools’ (2008) <[http://www.europarl.europa.eu/RegData/etudes/etudes/JOIN/2008/405392/IPOL-CULT_ET\(2008\)405392_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/etudes/JOIN/2008/405392/IPOL-CULT_ET(2008)405392_EN.pdf)> accessed 4 October 2019.

42 UNESCO, ‘Global Education Monitoring Report’ (n 17) 481–4.

43 M Nenadovic (ed), ‘Teaching About Refugees’ (2017) 28(5) *Intercultural Education*.

44 M Nenadovic, ‘Introductory Remarks to the Special Issue on Teaching About Refugees’ (2017) 28(5) *Intercultural Education* 427.

45 UNHCR, ‘Teaching About Refugees’ <<http://www.unhcr.org/en-us/teaching-about-refugees.html>> accessed 4 October 2019.

46 Council of Europe, ‘Competences for Democratic Culture – Living Together as Equals in Culturally Diverse Democratic Societies’ (2016) <<https://rm.coe.int/16806ccc07>> accessed 4 October 2019.

47 Nenadovic, ‘Teaching about refugees’ (n 43).

48 F B M De Waal, ‘Putting the Altruism Back into Altruism: The Evolution of Empathy’

(2008) 59 *Annual Review of Psychology* 279.

49 *ibid.*

empathy as a 'multifaceted construct that has both affective and cognitive components'.⁵⁰

As the capacity at the basis of any form of social interaction, empathy is an essential aspect of disciplines as varied as political theory, neuroscience, applied linguistics, social psychology and philosophy. Although it has emerged as a relevant concept in the fields of peace and conflict resolution, it has received little attention in international relations⁵¹ and even less in refugee studies. Despite the scarcity of papers in this area, one example worth citing is a study by Hartman and Morse involving Ivorian refugees, demonstrating how the first-hand experience of violence can actually augment people's ability to empathise with others.⁵²

2.2.2 Empathy and altruism

This study is based on the psychological theory that empathy can drive altruism. According to De Waal, once empathy has reached the level of sympathetic concern which involves other-orientation, it becomes the autonomous motivation of directed altruism, i.e. 'altruistic behaviour aimed at others in need, pain or distress'.⁵³

This theory is echoed by Batson's empathy-induced altruism hypothesis, which similarly identifies empathic concern as the source of altruistic attitudes.⁵⁴ Because of this connection between empathy and altruism, the stimulation of empathic reactions could have very positive repercussions on improving attitudes towards stigmatised groups such as refugees. In fact, according to this theory, being able to take the perspective of a stigmatised person can enhance empathy. This, in turn, can lead to the stigmatised person's welfare being regarded as valuable by the empathiser. This increased value could then be extended from the group member to the entire group if group membership is related to the stigmatisation – for instance if the person was a victim of ethnic slurs.⁵⁵

Interestingly, various studies show that in the case of a stigmatised individual empathy is experienced as a response to elements such as responsibility and controllability.⁵⁶ A research study demonstrated that participants felt more empathy for people with mental illness when they thought the person's condition was not their own fault. Participants also appeared more willing to help in this circumstance. By contrast, those who believed the people were responsible for their own diseases felt anger and fear, which translated into the desire to keep such individuals away from the community.⁵⁷

2.2.3 The 'failures' of empathy

Studying the circumstances and the causes of empathy 'failures' can be very revealing because empathy can indeed backfire and not necessarily lead to pro-social behaviour.⁵⁸ For instance, Zaki makes the important observation that empathy is not always automatic, but easily influenced by the context.⁵⁹ In particular, he identifies intergroup conflict and expertise as factors interfering with the empathic process. In the first case, research shows that in a situation of group rivalry, empathy can dissipate as soon as the target is perceived as no longer belonging to the group. In the case of expertise, Zaki draws attention to certain professions in constant close contact with human suffering for whom feeling empathy at all times could seriously interfere with their ability to carry out their tasks. He cites surgeons who, in order to operate on patients, need to control their empathic reactions. He also mentions a body of research showing that over time doctors and nurses tend to underestimate the pain experienced by their patients, thus showing a decrease in empathy.⁶⁰

Moreover, according to Broome, empathy is a 'failure' in the sense that it cannot help us further our understanding of another's situation as we are incapable of separating ourselves from our cultural baggage and experiences.⁶¹ Similarly, DeTurk argues that in intercultural communication the dominant group universalises their experiences, thus leaving no space to develop any empathy for minorities.⁶² Finally, in her discussion of empathy within the Israeli–Palestinian relationship, Head highlights that although empathy might be fostered during the dialogue phase, it does not

50 J Zaki and K Ochsner, 'The Neuroscience of Empathy: Progress, Pitfalls and Promise' (2012) 15(5) *Nature Neuroscience* 675.

51 See N Head, 'A Politics of Empathy: Encounters with Empathy in Israel and Palestine' (2016) 42 *Review of International Studies* 95.

52 A C Hartman and B S Morse, 'Violence, Empathy and Altruism: Evidence from the Ivorian Refugee Crisis in Liberia' (2017) <http://cega.berkeley.edu/assets/miscellaneous_files/119_-_HartmanMorseViolenceEmpathy-May_2015_-_ABCA.pdf> accessed 4 October 2019.

53 De Waal (n 48) 281.

54 C D Batson, 'Empathy-induced Altruistic Motivation' Draft of Lecture/Chapter for Inaugural Herzliya Symposium on 'Prosocial Motives, Emotions, and Behavior' (2008) 8.

55 C D Batson, J Chang, R Orr and J Rowland (n 7).

56 See N Eisenberg, N D Eggum and L Di Giunta, 'Empathy-related Responding: Associations with Prosocial Behavior, Aggression, and Intergroup Relations' (2010) 4(1) *Social Issues and Policy Review* <<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3017348/#R43>> accessed 4 October 2019.

57 See the study 'An Attribution Model of Public Discrimination Towards Persons with Mental Illness' by P M Corrigan, F E Markowitz, A Watson, D Rowan, M A Kubiak cited by Eisenberg, Eggum and Di Giunta (n 56).

58 M Cikara, E G Bruneau and R R Saxe, 'Us and Them: Intergroup Failures of Empathy' (2011) 20(3) *Current Directions in Psychological Science* 149.

59 J Zaki, 'Empathy: A Motivated Account' (2014) 140(6) *Psychological Bulletin* 1611.

60 *ibid.*

61 B. J. Broome 'Building shared meaning: Implications of a relational approach to empathy for teaching intercultural communication' (1991) 40(3) *Communication Education* 235-249.

62 S DeTurk, 'Intercultural empathy: Myth, competency, or possibility for alliance building?' (2001) 50(4) *Communication Education* 374-384.

necessarily lead to action afterwards. Other factors such as material interests, social identity and previous ideas and ideals are likely to prevent empathy from translating into change.⁶³

2.3 Virtual reality

The connection between empathy and virtual reality was popularised in 2015 by the filmmaker Chris Milk. In a TED Talk viewed more than 1.5 million times, he defined VR as the 'ultimate empathy machine'.⁶⁴ The possibilities unleashed by the introduction of affordable VR viewers combined with the accessibility of 360-degree filming technology fuelled the mediatic enthusiasm for the claim that VR could cure the empathy deficit of our era. One of these viewers was the Google Cardboard, released in 2014. Soon after, in 2015, large platforms such as YouTube and Facebook started supporting 360-degree videos. This led to a proliferation of 3-D videos that, combined with the affordability of the Cardboard viewers, made experiencing virtual reality very accessible.

Even large media groups such as CNN, the BBC, The Economist Group and The New York Times Company started experimenting with 360-degree video content and adding VR as another layer of content.⁶⁵ The momentum was such that on 8 November 2015, the *New York Times* gifted all its Sunday print subscribers a Google Cardboard VR viewer, thus giving 1.3 million readers instant access to VR.⁶⁶ Although on a smaller scale, *The Guardian* undertook a similar initiative on October 7, 2017, when it gave away 97,000 Google Cardboard viewers to its UK readers.⁶⁷

This eagerness to adopt VR quickly spread to many large NGOs. In the UK, Amnesty International director, Kate Allen, stated: 'If a picture is worth a thousand words, then a virtual reality experience is worth a whole book'.⁶⁸ One of Amnesty's successful VR projects involved transporting passers-by to the streets of Aleppo to denounce barrel bombing. The response was very positive and resulted in a 16 per cent increase in direct debit donations.⁶⁹ UNICEF made similar claims. According to the organisation, the showing of the 360-degree VR video, *Clouds Over Sidra*, helped them achieve a 40 per cent rise in donations. Recently, the IRC also chose VR to show life in a refugee camp in Lebanon on the premise that: 'We can't bring donors or people to the field, but we bring the field to [them]. That's what's so great about VR; that's what makes it... such an important tool for charities'.⁷⁰

Within the academic world, one of the most active institutes in this area is the Stanford Virtual Human Interaction Lab, which has focused many of its efforts on studying the relation between VR and empathy. One of its latest projects, entitled 'Empathy at Scale' and led by Zaki, 'seeks to design, test, and distribute virtual reality interventions that teach empathy'.⁷¹

2.3.1 The many sides of the empathy debate

This wave of popularity around VR and its attributed capacity to be 'the ultimate empathy machine' provoked an intense media debate involving artists and journalists as well as social scientists and psychologists. For instance, traditionally trained journalists, such as Nonny de la Pena, started seeing in this medium the possibility of realising immersive journalism and therefore engaging the audience actively by offering them first-person experiences of news stories.⁷² At the same time, some were concerned the focus on empathy was putting VR at risk of 'becoming the medium for showing the horrors of war, and showing struggle – a very dark medium'.⁷³

For their part, social scientists and psychologists have been stressing VR does not automatically or scientifically foster empathy. Bailenson, the founding director of the Stanford Virtual Human Interaction Lab, who has been researching this topic for 15 years, believes that VR can indeed lead to empathy, but, in a similar way to other media, in order to do so it needs to bring quality content to the audience or, in Bailenson's words, content which has been 'crafted carefully'.⁷⁴ Janet Murray, a professor of digital media, shares the same view about empathy not being engendered

63 Head (n 51).

64 Milk (n 9).

65 See for instance <<https://edition.cnn.com/vr/>>, <<http://www.bbc.co.uk/connectedstudio/projects/virtual-reality>>, <<https://www.economist.com/topics/virtual-and-augmented-reality>>, <<http://www.nytimes.com/marketing/nytvr/>>.

66 M Wohlsen, 'Google Cardboard's New York Times Experiment Just Hooked a Generation on VR' WIRE (9 November 2015) <<https://www.wired.com/2015/11/google-cardboards-new-york-times-experiment-just-hooked-a-generation-on-vr/>> accessed 4 October 2019.

67 'Guardian to Give Away Nearly 100,000 Google Cardboard Headsets to Readers and Launches New Guardian VR App for Cardboard' *The Guardian* (London, 6 October 2017) <<https://www.theguardian.com/gnm-press-office/2017/oct/06/guardian-to-give-away-nearly-100000-google-cardboard-headsets-to-readers-and-launches-new-guardian-vr-app-for-cardboard>> accessed 4 October 2019.

68 Amnesty International, '#360Syria "Virtual Tour" Website Reveals Devastation of Aleppo Barrel Bombing' 11 March 2016 <<https://www.amnesty.org.uk/press-releases/360syria-virtual-tour-website-reveals-devastation-aleppo-barrel-bombing>> accessed 4 October 2019.

69 Amnesty International, 'First Use of Virtual Reality Fundraising a Hit with Members of the Public' 22 May 2015 <<https://www.amnesty.org.uk/press-releases/first-use-virtual-reality-fundraising-hit-members-public>> accessed 4 October 2019.

70 P Bloom, 'It's Ridiculous to Use Virtual Reality to Empathize with Refugees' *The Atlantic* (3 February 2018).

71 Virtual Human Interaction Lab, 'Empathy at Scale' Stanford University <<https://vhil.stanford.edu/projects/2015/empathy-at-scale/>> accessed 4 October 2019.

72 N de la Pena et al., 'Immersive Journalism: Immersive Virtual Reality for the First-Person Experience of News' (2010) 19(4) *Presence* 291.

73 R Manthorpe, 'Seven Lessons for VR Journalists, from the People Who Should Know' WIRE (10 May 2017) <<https://www.wired.co.uk/article/making-virtual-reality-journalism-reuters-report>> accessed 4 October 2019.

74 J Bailenson, 'How to Create Empathy in VR' WIRE (26 February 2018) <<http://www.wired.co.uk/article/empathy-virtual-reality-jeremy-bailenson-stanford>> accessed 4 October 2019.

automatically, instead stating that it 'must be produced as in any other storytelling medium by mature narrative techniques employed by skilled practitioners'.⁷⁵

Another controversial argument was recently put forward by the psychologist Paul Bloom, who argued the real 'empathy machines' are books. In his opinion, even if VR allows viewers to visit a refugee camp, it does not let them experience the fear refugees have to face. Duration, safety and control are aspects of VR preventing an individual from really understanding what it is like to be living the life of a refugee. While he does not deny VR might have some educational value in showing otherwise inaccessible environments, his argument goes further in asserting that empathy might not be desirable as a moral compass. According to him, empathy might be more easily directed to individuals similar to ourselves. Similarity, however, should not be a deciding factor in our choice of whom to help. In this sense, therefore, empathy might be misleading and ultimately cloud our judgement on how our resources should be best spent.⁷⁶

75 J H Murray, 'Not a Film and Not an Empathy Machine' (6 October 2016) <<https://immerse.news/not-a-film-and-not-an-empathy-machine-48b63b0eda93?gi=851ca58935e0>> accessed 4 October 2019.

76 Bloom (n 70).

3. Methodology

3.1 Area of study and research questions

The area of this research includes the fields of education about refugees, empathy and VR. The main research question it aims to answer is the following: is VR effective in fostering empathy within the context of education about refugees?

The sub-questions this study will address are:

- for what reasons is it (in)effective?
- will the experience of VR give rise to a kind of empathy that leads to action?

3.2 Research design

In order to answer the research questions, a study was designed which took place in the spring of 2018. It involved 107 middle school and high school students attending Green School⁷⁷ and Pelangi School,⁷⁸ both located on the island of Bali, Indonesia. The study consisted of showing the participants two videos – the 360-degree video *Clouds Over Sidra* and the short film *Step into a Refugee Camp* – and asking them to answer a questionnaire before and after undergoing these experiences.

Clouds Over Sidra was shot in only two days in December 2014 by Chris Milk and Gabo Arora with the support of the UNVR. It takes place in the Za'atari camp in Jordan and presents the life of Sidra, a 12-year-old from Syria, who leads the audience through the camp.

Step into a Refugee Camp is an online multimodal news story about Syrian refugees also living in the Za'atari camp in Jordan. It was produced by the *New York Times* and broadcast live on Facebook on 30 December 2016. It was chosen because it was filmed in the same camp as *Clouds Over Sidra*. In addition, it is a short film, but with an innovative component: real-time interventions of viewers around the world were shown on half of the screen during the live streaming. These were further integrated into the content of the video, sometimes as questions to the refugees themselves and sometimes as comments. Allowing the audience to 'tag along'⁷⁹ offered a certain level of interaction not common to short films, but one which resembles the sense of presence enabled by VR. This format seems therefore more suited for a comparison to a novel medium such as VR.

In order to maximise the statistical significance of the study, the within-subjects design was adopted. This means that each participant was exposed to both *Clouds Over Sidra* and *Step into a Refugee Camp*.

The use of the maximum number of subjects available increased the statistical power of the study and decreased the possibility of beta error, that is the probability of not discovering an effect although it really does exist.⁸⁰ By contrast, the adoption of a between-subjects design would have halved the sample as 50 per cent of the participants would have had the experience of *Clouds Over Sidra* and the rest that of *Step into a Refugee Camp*.

The other advantage of the within-subjects design is a reduction in error variance.⁸¹ This refers to individual difference variables that might affect the results in between-subjects studies – even when subjects are randomly assigned to the two groups. For instance, factors such as intelligence, maturity, political background, etc. might impact the participants' experience. However, this variance is minimised with the within-subjects design: the conditions vis-à-vis individual difference variables do not change because the same participants undergo the same experiences.

Next to these advantages, it is also important to point out the main weakness of this design, namely the 'carryover effect'. This indicates the evaluation of one experience might have been influenced by participants also having been exposed to the other. This could be positive in the sense that one experience might have helped to trigger empathy and the other might have built upon this first reaction (practice effect). However, it could also be negative. For instance, one experience might have been off-putting, thus hindering the development of empathic feelings (fatigue effect).⁸² Overall, this effect is never desirable because the goal of the study is to assess the effectiveness of VR on its own, not combined with other media.

In order to lessen the 'carryover effect', for each of the questions comparing *Clouds Over Sidra* and *Step into a Refugee Camp*, the two videos appear in the first choice position in an alternate manner. Hence, the question 'Which of the two videos did you like the most?' presents *Step into a Refugee Camp* first. This is followed by the question 'Which experience did you like the most?' where virtual reality and *Clouds Over Sidra* feature as the first choice.

Moreover, the questions asking participants about their emotional reaction do not list the feelings to grade in the same order. In the case of *Step into a Refugee Camp*, the succession is 'feeling sorry', '(un)hopeful', 'angry/frustrated', 'sympathetic', 'sad', 'concerned' and 'anxious/uncomfortable', while with regards to *Clouds Over Sidra* it is 'feeling

77 Green School <<https://www.greenschool.org/>> accessed 4 October 2019.

78 Pelangi School <<http://www.pelangischoolbali.com/>> accessed 4 October 2019.

79 Acosta (n 3).

80 'Within-Subjects Designs' Psychology World <https://web.mst.edu/~psyworld/within_subjects.htm> accessed 4 October 2019. See also R A McQueen, C Knussen, 'Planning a Study – The Design' in *Research Methods for Social Science: A Practical Introduction* (Prentice Hall 2002) 24.

81 *ibid.*

82 *ibid.*

sorry', 'anxious/uncomfortable', 'sad', 'concerned', 'angry/frustrated', '(un)hopeful' and 'sympathetic'. This strategy was implemented in order to encourage the respondents to reflect upon the answer and not reply automatically by anticipating the question.

Despite these attempts, it is important to point out this weakness especially affects the section on responsibility and the questions aimed at assessing the change in attitude before and after viewing the material. The absence of a control group in order to test the two experiences separately does not allow us to determine which one had more of an impact than the other in triggering different forms of responsibility or different changes in attitude.

3.3 Methods

3.3.1 Desk-based research

Desk-based research was carried out to examine the main theories of empathy and the debate around the recent developments and uses of VR, and discover material dealing with education about refugees. It also was necessary to identify the main principles on which to build the questionnaires and analyse the data collected.

The 'snowball' method was used to search for journal articles. This means the bibliographies of journals were examined thoroughly to find other relevant sources. Moreover, search terms such as 'education about refugees', 'empathy', 'empathy and refugees', 'empathy and education', 'empathy and altruism', 'virtual reality', 'empathy and virtual reality', etc. were entered both in the publications *Journal of Refugee Studies* and *Refugee Survey Quarterly* and, more generally, in the University of London online library catalogue. Finally, as the debate surrounding virtual reality vis-à-vis empathy predominantly took place in the media world, this was mainly researched through magazines and newspaper articles.

3.3.2 Questionnaires

The data gathering method used was the self-report questionnaire. According to a 2010 review on how to research virtual worlds in elementary and higher education, questionnaires appeared to be the most frequently used method of collecting data.⁸³

3.3.2.1 Design

Two separate questionnaires were designed. The first one was distributed at the very beginning prior to the participants viewing any of the videos. It contained generic questions about the demographics of the participants (age, sex and nationality), their experience with and attitude towards VR and refugees. These were aimed at providing some analytical categories to analyse the data collected.

The participants accessed the second questionnaire only after experiencing both *Clouds Over Sidra* and *Step into a Refugee Camp*. This featured questions on their reactions to both videos. In addition, it included some questions about responsibility and some of the same questions already asked in the first questionnaire.

In order to maintain anonymity, the authorship of the two questionnaires was achieved by assigning participants a reference number they had to enter on both questionnaires. This system also allowed pairing and comparing of the questionnaires.

3.3.2.2 Objectives

The questionnaires were designed to fulfil two objectives. The first one was to collect data to answer the core question of whether VR is effective compared to other media in fostering empathy. To this end, some of the questions addressed both the emotional and cognitive empathic reactions of the respondents. Additionally, some specific questions about the medium of VR were included in order to understand whether its immersive qualities added value vis-à-vis eliciting empathy.

Second, the questionnaires aimed to provide a before/after assessment to highlight any difference in attitude that might have taken place after the participants experienced both the VR video and the multimodal news story. Consequently, they share some of the same questions. These were: 'What do you think are the three things (not people) you would take with you if you had to flee in a hurry?', 'How would you define a refugee?' and 'Do you think it is our responsibility to help refugees?'

3.3.2.3 Limitations

These questionnaires are based on self-reporting, which is not a precise measurement tool. There are, however, some strategies that can be implemented to improve accuracy. One of these is anonymity.⁸⁴ Another is to ask the respondents to answer truthfully.⁸⁵ In the design and administration of these questionnaires both these techniques were implemented.

However, these strategies are not enough to prevent a number of variables from influencing the final results. Although

83 K Foon Hew and W S Cheung, 'Use of Three-dimensional (3-D) Immersive Virtual Worlds in K-12 and Higher Education Settings: A Review of the Research' (2010) 41(1) *British Journal of Educational Technology* 33.

84 K A Korb, 'Self-report Questionnaires: Can they Collect Accurate Information?' (2011) 1 *Journal of Educational Foundations* 5 <http://korbedpsych.com/LinkedFiles/Self_Report_Questionnaires.pdf> accessed 4 October 2019.

85 *ibid.*

the questions were carefully formulated so as to avoid biasing statements, participants might nevertheless have responded according to what they deemed a socially desirable answer. In other words, they might have had a notion of what was the 'correct answer' that made them look good.⁸⁶ This aspect also needs consideration in the light of the liberal orientation of the schools where the study took place.

Finally, dispositional variables might also play a role.⁸⁷ Since this study involved the empathic response to a given situation ('situation empathy'), an individual predisposition to experience empathy ('dispositional empathy') might also have had an effect on the research findings.⁸⁸

3.4 Participants

The 107 participants (51 girls and 56 boys with a mean age of 13.8) who took part in the study were not selected for any reasons other than availability. The four largest nationality groups represented were the USA with 20 per cent, Australia with 17 per cent, Indonesia with 15 per cent and finally the UK with 13 per cent. Moreover, it is also relevant to point out that 31 per cent of the students had two or more nationalities and 65 per cent had one nationality.

3.5 Data analysis

3.5.1 Quantitative method

The quantitative method was used in the first questionnaire predominantly to collect demographic data. Additionally, the question 'Do you think we have a responsibility to help refugees?' based on a 5-point scale featured in both questionnaires. This enabled a quantitative comparison between the answers given before and after participants underwent the two experiences of *Clouds Over Sidra* and *Step into a Refugee Camp*.

Five-point scale questions were also employed to measure the participants' reactions to the two media and compare them quantitatively. These were integrated with the open-ended question: 'Any other feeling or comment about *Clouds Over Sidra/Step into a Refugee Camp*?' to give participants a further opportunity to explain their grading. Another instance of this mixed method is the question: 'Why? Please explain why you think it is or is not our responsibility to help refugees', which follows the quantitative question mentioned above about responsibility.

3.5.2 Qualitative method

According to Richards and Morse, among the purposes of qualitative methods is 'to learn from the participants in a setting or a process the way they experience it.'⁸⁹ To this end, four open-ended questions have been added to the first questionnaire and 12 to the second.

Data analysis was carried out using the program Excel and following the process recommended by Ellen Taylor-Powell and Marcus Renner.⁹⁰ After acquiring familiarity with the answers by reading them multiple times, these were categorised. First, recurrent themes were identified by adding an empty column next to the answer column and filling it in, cell by cell, with some keywords summarising the main concepts expressed in the reply. Second, the emerging themes were grouped into categories. This process was repeated a few times until no new themes or subcategories emerged and was then applied to all the answers to the open-ended questions. At the end of this procedure, different categories were obtained for each question. Once they were finalised, they were quantified in percentages in order to establish their relative importance. Last, similar categories emerging from different answers were connected and interpreted together in the discussion of the findings.

86 K Foon Hew and W S Cheung (n 83).

87 See N Eisenberg and A S Morris, 'The Origins and Social Significance of Empathy-related Responding. A Review of Empathy and Moral Development: Implications for Caring and Justice by M. L. Hoffman' (2001) 14(1) *Social Justice Research* 95.

88 Stanford Encyclopedia of Philosophy, 'Measuring Empathy' <<https://plato.stanford.edu/entries/empathy/measuring.html>> accessed 4 October 2019.

89 L Richards and J M Morse, *Read Me First for a User's Guide to Qualitative Methodology* (2nd edition, Sage 2007) 28.

90 E T Powell and M Renner, 'Analyzing Qualitative Data' (2003) <<https://deltastate.edu/docs/irp/Analyzing%20Qualitative%20Data.pdf>> accessed 4 October 2019.

4. Findings

4.1 Part 1: Comparing the experiences of 'Clouds Over Sidra' and 'Step into a Refugee Camp'

The set of questions analysing and comparing the experiences of *Clouds Over Sidra* and *Step into a Refugee Camp* was structured around Davis's multidimensionality of empathy.⁹¹ According to this concept, cognitive and affective empathy are interdependent and influence each other. Hence, some of the questions were aimed at assessing the cognitive, perspective-taking capabilities of the participants. An example of this was: 'Which one of the videos helped you more to "put yourself in the shoes of a refugee"?' Others were focused on the emotional reactivity of the participants. Instances of these were the quantitative questions asking students to grade their feelings.

4.1.1 'Clouds Over Sidra' versus 'Step into a Refugee Camp'

When asked which video they liked the most, 63 per cent of participants gave their preference to *Clouds Over Sidra*. At the same time, 88 per cent indicated this as the experience that helped them more put themselves into the shoes of a refugee.

For both questions, the prevailing reasons for choosing *Clouds Over Sidra* were the feeling of 'being there' (respectively 24 per cent and 20 per cent) and being realistic (24 per cent and 12 per cent). Furthermore, 23 per cent of respondents preferred it simply because VR is 'cool' and the 360-degree view felt novel, while another 21 per cent liked it more because it offered the perspective of a child. A further theme that emerged from these answers was the depiction of daily life chosen by 12 per cent of those who preferred *Clouds Over Sidra* and also, interestingly, by 11 per cent of those who selected *Step into a Refugee Camp*.

It is noteworthy that respondents chose *Step into a Refugee Camp* mainly because it was more informative (37 per cent). By contrast, this accounted for only 6 per cent of the answers of those who selected *Clouds Over Sidra*. Additional reasons for preferring *Step into a Refugee Camp* were the depiction of multiple perspectives (34 per cent) and the fact it showed comments from viewers all over the world (34 per cent). Last, 11 per cent chose it because they did not like the VR experience due to the low quality of the Cardboard viewers.

4.1.2 Short-film versus VR – 'Which experience did you like the most?'

88 per cent of respondents expressed their preference for VR as a medium. In addition to the theme of 'being there' (38 per cent), another noteworthy category included 'being able to look all around' (20 per cent), while 13 per cent preferred VR because it offered them a 360-degree, tri-dimensional experience.

An interesting piece of data is that 61 per cent of those who indicated *Step into a Refugee Camp* as their preferred video chose VR as their favourite medium (11 out of 17 of these had never experienced VR before). However, the reverse is not true as only 8 per cent of participants who chose *Clouds Over Sidra* selected the short film as their preferred experience (40 per cent did so because they felt physical discomfort when they used the Cardboard viewer).

4.1.3 'Was it useful to be able to move around in Sidra's world?'

97 per cent of respondents confirmed the usefulness of being able to move around in Sidra's world. This high percentage means the freedom granted by VR to choose where to go and what to focus on at any given time was considered important by both those students who had never tried VR before and those who had. Bailenson recently discussed various studies demonstrating the more people can move, the more empathic their experience will be. In his words: 'If you want to move people, you should move them.'⁹²

In this research, an attempt was made to understand the link between physical movement and empathy by examining the answers to the open-ended question asking why moving around was useful. Data analysis revealed that 31 per cent of answers contained some level of empathy. Themes classified as signs of an empathic reaction included feeling connected, feeling like a refugee, being able to see themselves in the refugees' shoes, feeling sadness, sympathy, developing a deeper understanding by being there and wanting to help. Here are some opinions of how being able to move around could improve perspective-taking capacities and stimulate empathy: '[i]t made you feel like you were a refugee yourself'⁹³ and '[i]t was moving and inspiring, it now feels like I should do something about it.'⁹⁴

4.1.4 Emotional reactivity

In order to understand the emotional reactivity of the participants, a series of questions was formulated asking students to grade their feelings from 1 (lowest) to 5 (highest). These included feeling sorry, angry, uncomfortable/anxious, hopeful, sympathetic, sad and concerned. They were chosen on the basis of Davis's scales measuring empathic

91 M H Davis, 'A Multidimensional Approach to Individual Differences in Empathy' (1980) 10 *JSAS Catalog of Selected Documents in Psychology* 85.

92 Bailenson (n 74).

93 804, Student of Green School, Bali, Indonesia, 23 April 2018.

94 823, Student of Green School, Bali, Indonesia, 23 April 2018.

concern (feeling sympathy for others) and personal distress (feeling uncomfortable vis-à-vis the suffering of others).⁹⁵

These questions were also an attempt to capture both parallel and reactive empathy. Parallel empathy refers to emotions matching those of the videos' protagonists and was assessed through the questions about sadness, hopefulness and anger/frustration. This kind of empathy is important because it can provoke feelings of injustice, which might be used to dismantle prejudice.

Reactive empathy, on the contrary, includes feelings of being sorry, concerned and sympathetic. On the one hand, research shows these types of feelings can lead to cognitive dissonance. This occurs when we are feeling sorry, but at the same time we do not want to feel that way – similar to when we close our eyes or look away while watching a movie that is having a strong emotional impact on us. On the other hand, they can also inspire a desire to counteract prejudice.⁹⁶

Reactive empathy also comprises feelings of personal distress when confronted with another's suffering. Participants were asked to indicate if they felt uncomfortable or anxious after going through the two experiences because the predominance of these feelings could impact negatively the desire to improve intergroup relations.

The scale questions were followed by an open-ended question asking participants if they experienced any other feelings during the viewings. This section also included the question: 'Which video gave you a stronger emotional reaction?' in order to allow participants to compare *Clouds Over Sidra* and *Step into a Refugee Camp* directly.

4.1.4.1 Results

For each scale question, the number choice was multiplied by the number of students who selected it and then summed up. This gave us an overall value comprehensive of all choices. The results are summarised in the table below for an easy comparison.

	Sorry	Hopeful	Angry	Sympathetic	Sad	Concerned	Uncomfortable/ Anxious
<i>Clouds Over Sidra</i>	449	380	388	443	416	426	368
<i>Step into a Refugee Camp</i>	435	354	366	440	387	422	428

In answer to the question about which video gave them the stronger emotional reaction, 65 per cent expressed their preference for *Clouds Over Sidra*. The reasons for choosing *Clouds Over Sidra* reflected previous results: being there (16 per cent), portraying a child's perspective (16 per cent) and coming across as more real (15 per cent). The same can be said for *Step into a Refugee Camp* as two of the predominant themes had also appeared before, namely the depiction of multiple perspectives (25 per cent) and the negative comments coming from around the world (19 per cent). Moreover, this was the first time the theme of family hardship surfaced (11 per cent).

4.1.5 Discussion

The quantitative questions gave us a first indication that *Clouds Over Sidra* was more effective than *Step into a Refugee Camp* in fostering empathy: 88 per cent indicated it as the experience that helped them better put themselves into a refugee's shoes and 65 per cent as the video that gave them a stronger emotional reaction.

From the analysis of the qualitative questions, three main themes were identified in connection with the concept of empathy: fostering better understanding, the importance of relatability and 'being there'. Additionally, the answers to the emotional reactivity questions also highlighted the difference between the two experiences, especially regarding the arousal of parallel empathy.

4.1.5.1 Fostering better understanding

When we look at the list of reasons why participants chose one experience versus the other, it seems clear that those who selected *Step into a Refugee Camp* valued its informative aspect. In other words, they especially focused on the amount of information they could extrapolate from the content. This emerged from the appreciation of being exposed to multiple perspectives and life stories. Additionally, this video offered the unique advantage of providing information not only about the refugees living in the Za'atari camp, but also about the attitude towards refugees of people around the world. In the words of one of the participants: 'This video really gave me a deeper perspective and I feel as though it gave me more information as well as gave my [sic] insight on the opinions of civilians all around the world.'⁹⁷

By contrast, the participants who stated their preference for *Clouds Over Sidra* based their choice mainly on what they felt during the experience. This video too delivered new information, but the level of better understanding it helped

95 Davis (n 91).

96 Eisenberg, Eggum and Di Giunta (n 56).

97 TV 117, Student of Green School, Bali, Indonesia, 21 May 2018.

achieve was attributed to feelings of 'being there' and the sense of realism experienced through VR: 'I liked the VR experience more, because, I think that "being" there helped my realize the life of the refugees...'⁹⁸ This experiential learning enabled by VR is further confirmed by the fact that 88 per cent of respondents indicated *Clouds Over Sidra* as the experience that helped them better take the perspective of a refugee.

It is indisputable that both videos brought about a new level of understanding of refugee life. However, while in *Step into a Refugee Camp* this was stimulated through the delivery of context and facts, in *Clouds Over Sidra* it was achieved through a process of being immersed in a different world. Hence, sharing the same reality as refugees, even if virtually, seemed more likely to trigger and develop the affective (feeling the same as a refugee) and cognitive (understanding the reality of refugee life) elements characterising the multidimensionality of empathy. This observation is validated by the study of Gehlbach et al., which found 'virtual environments...particularly effective settings to train individuals in how to improve their [social perspective taking] capacities.'⁹⁹

4.1.5.2 The importance of relatability

Another key reason for *Clouds Over Sidra's* success at eliciting empathy was that it offered a higher level of relatability. This was achieved through the depiction of a child's daily life, but also through the focus on a single story, which allowed for more intimacy and a deeper level of acquaintance. Since all participants were between 12 and 18 years old, they could easily identify with Sidra who at the time of filming was 12. This commonality created a much stronger connection and favoured the development of empathy. One of the students wrote: '[T]he fact that it was narrated from the point of [view] of a young girl made me especially empathize with it more because I am a young girl!'¹⁰⁰

Interestingly, *Step into a Refugee Camp* also contained a comparable element. Among the people interviewed was a family – a mother with four children, including a 15-year-old daughter who aspired to become a doctor. Similarly to *Clouds Over Sidra*, we were invited into their tent where they shared their dreams and sufferings. This intimate moment was highlighted by respondents as one of the reasons why they had a stronger emotional reaction to this video versus the VR experience. They could easily recognise the pain of a mother unable to provide for her children and that of children who had been separated from their father for over a year. In the words of two students, *Step into a Refugee Camp* was more emotional because '[it] was about a mother's concern for her family'¹⁰¹ and because 'the 15th [sic] year [old] girl on the house is a little bit relateable [sic] because [sic] we are in the same age group... and I feel more sympathy because I hope she can have her dream come true.'¹⁰²

Another feature of both *Clouds Over Sidra* and *Step into a Refugee Camp* that stressed the importance of being able to relate as a way to foster empathy was the idea that we all share a common humanity.¹⁰³ This strategy was employed in both videos to mitigate differences among the 'us' versus 'them' dichotomy that could severely hinder the process leading to empathy. It was mainly achieved by focusing on daily activities such as working in a shop or sharing food with one's family. This was clearly reflected by the participants' many comments on daily aspects of refugee life, which they found easily recognisable and relatable – e.g. the 'yumminess of bread',¹⁰⁴ seeing what they were having for dinner or what their school was like.¹⁰⁵

However, although this element was present in both videos, VR had the advantage that it offered the freedom to explore the environment where refugees lived their daily lives. Additionally, it gave viewers control over where to turn or what to investigate. This made respondents feel as if they were participating in life at the camp, not just learning about it, and in turn facilitated the process of perspective-taking. Imagining yourself as part of another person's surroundings is more challenging when you are familiar with only a small portion of it (and one that has been decided for you by the cameraperson). According to one student: 'it's almost as if your [sic] there, and you get to see how life really goes on rather than just in front of a camera.'¹⁰⁶

4.1.5.3 'Being there'

It is rather tempting to read the strong preference given to VR as a medium – 88 per cent of students selected it – and its capacity to take viewers inside the scene as evidence of its effectiveness in fostering empathy. Not by chance has it

98 TV 109, Student of Green School, Bali, Indonesia, 21 May 2018.

99 H Gehlbach, G Marietta, A M King, C Karutz, J N Bailenson, C Dede, 'Many Ways to Walk a Mile in Another's Moccasins: Type of Social Perspective Taking and its Effect on Negotiation Outcomes' (2015) 52 *Computers in Human Behavior* 529.

100 TV 118, Student of Green School, Bali, Indonesia, 21 May 2018.

101 VR 916, Student of Green School, Bali, Indonesia, 21 May 2018.

102 TV 103, Student of Green School, Bali, Indonesia, 21 May 2018.

103 Common humanity here is meant as a sense of belonging, derived from sharing values and responsibility and respecting differences and diversity: UNESCO Associated Schools Network, <<https://aspnet.unesco.org/en-us/Pages/Global-Citizenship-Education.aspx>>. Common humanity enables mutual recognition and social inclusion. By highlighting a common identity, it lays the foundation for 'an ethos of respect for the equal dignity of every individual and hospitality towards the wider world': 'Living Together As Equals in Dignity' (2008) White Paper on Intercultural Dialogue <https://www.coe.int/t/dg4/intercultural/Source/Pub_White_Paper/White%20Paper_final_revised_EN.pdf> accessed 4 October 2019, 14.

104 PVR 108, Student of Pelangi School, Bali, Indonesia, 22 May 2018.

105 721, Student of Green School, Bali, Indonesia, 23 April 2018.

106 814, Student of Green School, Bali, Indonesia, 23 April 2018.

been hurriedly defined as an ‘empathy machine’.¹⁰⁷ However, as Zaki has observed, VR and the advantage of creating the impression of ‘being there’ on their own cannot automatically be considered as leading to empathy.¹⁰⁸

Therefore, the sensation of ‘being there’ experienced with *Clouds Over Sidra* calls for a careful analysis. As stated above, if taken in isolation, it cannot be automatically linked to empathy. VR is only a platform – dropping an individual virtually in foreign surroundings is no guarantee that they will have an empathic reaction. In this case, however, the impression of ‘being there’ was accompanied by content which was highly relatable, as discussed in the previous section. This expanded the feeling of being physically present in a distant environment to feeling emotionally connected to such an environment.

This emerged especially from the answers of those who chose *Clouds Over Sidra* in answer to the question ‘Which one of the videos helped you more to “put yourself in the shoes of a refugee”?’ In this context, ‘being there’ could be seen as leading to empathy because it was associated with being able to adopt a refugee’s perspective and even feeling like a refugee. As one student pointed out: ‘it is more likely to feel somebody’s emotions when one has the feeling of being in the same room as them’.¹⁰⁹

It is therefore clear that the immersive qualities of VR creating the impression of ‘being there’ offer an optimal starting point in the process leading to empathy. Nevertheless, we cannot rely on these alone. Instead, they need to be combined with compelling storytelling strategies.¹¹⁰ Showing snippets of real life and telling the story from a child’s perspective are features enhanced by the sensation of being in a different environment, thus creating a very powerful combination capable of triggering an empathic reaction, as the study has shown.

4.1.5.4 Discussion about emotional reactivity

The quantitative results aimed at measuring the emotions at the base of reactive empathy revealed very slight differences between *Step into a Refugee Camp* and *Clouds Over Sidra*.

Next to elements such as the depiction of daily life discussed above, a component of the video *Step into a Refugee Camp* that contributed to eliciting reactive empathy was the live streaming of comments from all over the world. These provoked a lot of emotions in the participants who – at least to a certain extent – identified with the people sending in their opinions and questions. Some of the comments were ‘heart-warming’ and inspired a sense of hope. However, the negative ones were a cause of discomfort – the only emotion that scored higher for *Step into a Refugee Camp*. To cite one student: ‘I just think its monstrous how some people have absolutely no empathy for these refugees. They’ve lost their homes and parts of their families... I honestly believe that anyone who can look at the distress these people are in and genuinely not care isn’t human’.¹¹¹

The reactions triggered by the comments must be noted because they could have two opposite outcomes. On the one hand they might lead to a desire to fight prejudice, on the other hand they might bring about a ‘failure of empathy’ by posing a real challenge to participants to face the sufferings portrayed. This phenomenon, previously described as cognitive dissonance, was reflected in the answers expressing dislike for the comments.

By contrast, in the case of parallel empathy *Clouds Over Sidra* clearly surpassed *Step into a Refugee Camp*. VR’s ability to create the feeling of ‘being there’, and the focus on only one story showing life in the camp from a child’s perspective, enabled participants to step into Sidra’s shoes and share her feelings and experiences: ‘when you look around it’s like you’re there and you’re going through the same thing’.¹¹²

4.1.6 The role of the novelty effect

When the discussion is focused on VR, the question is often brought up of how much of its effectiveness relates to the novelty effect it might have. This is particularly important to consider, especially because 37 per cent of students participating in the study had never tried VR before, and even those who had did not use it on a regular basis. Frequent use is likely to decrease the enthusiasm with which students welcome this technology. Throughout the questionnaires the idea of VR as being interesting ‘just because it is VR’ definitely emerged. Adjectives such as ‘fun, surprising, cool’ were used to describe the VR experience with the risk of trivialising it.

The first action taken to mitigate the novelty effect was to choose another video that was also innovative in its use of technology and social media. Second, the questionnaires revealed that the risk of trivialisation did not materialise; instead VR resulted in an open attitude to learning. Although the concern that this enthusiasm might wane over time is certainly valid, the welcoming reception for VR lent a positive note to the theme of refugees right from the onset. Participants especially appreciated the interactive aspect of VR and noted it helped them feel more involved, focused and engaged: ‘[i]t was interactive which made me focus’.¹¹³

107 Milk (n 9).

108 Zaki (n 59).

109 123, Student of Pelangi School, Bali, Indonesia, 22 May 2018.

110 For a discussion of storytelling and VR, see Murray (n 75).

111 PVR 102, Student of Pelangi School, Bali, Indonesia, 22 May 2018.

112 906, Student of Green School, Bali, Indonesia, 21 May 2018.

113 908, Student of Green School, Bali, Indonesia, 21 May 2018.

4.1.7 Conclusion

These findings suggest *Clouds Over Sidra* was more effective than *Step into a Refugee Camp* in eliciting empathy. This conclusion has been reached through the analysis of quantitative data and the three main themes – fostering better understanding, the importance of relatability and ‘being there’ – that emerged from the qualitative questions.

In particular, while quantitative data has confirmed the effectiveness of VR in eliciting empathy, qualitative data has helped demonstrate how the immersive qualities of VR interacted with the content in engaging both the cognitive and emotional aspects of empathy and facilitating the process of perspective-taking.

4.2 Part 2: Does empathy lead to responsible agency?

This study showed 80 per cent of participants believed it was their responsibility to help refugees.¹¹⁴ On this premise, this section focuses on what specific form of responsibility the experiences of *Clouds Over Sidra* and *Step into a Refugee Camp* made possible. This will lay the basis for a key component of the study, namely the discussion of the empathy-induced altruism hypothesis. Simply evoking an empathic reaction would not fully serve the purpose of educating young minds about the phenomenon of forced migration unless empathy were followed by some responsible agency.

4.2.1 ‘We are a community, one world’¹¹⁵

The first step into this investigation is the analysis of the answers to the question: ‘Please explain why you think it is or is not our responsibility to help refugees’. An LSE study asserted that representation of refugees based on empathy inspired charitable giving but was also a reminder of refugees’ otherness.¹¹⁶ This was not reflected by the findings of this study. By contrast, 30 per cent of answers fell in line with the theory of the philosopher Martha Nussbaum, who sustains that a cosmopolitan community¹¹⁷ of human beings prevails over communities based on nationality, ethnicity or religion.¹¹⁸ In the words of one participant: ‘We are a community, one world and we have to stand up for each other, take care of each other.’¹¹⁹

This universalist-cosmopolitan philosophy, which is also the foundation of the humanitarian movement embodied by the International Committee of the Red Cross (ICRC),¹²⁰ is based upon the concept that ‘being human’ is enough of a motivation to call for the support of fellow human beings regardless of other factors. As one student put it: ‘we are all humans so we should help each other out.’¹²¹ In addition to this, the other factor that triggered the responsibility to help was our ability to do so, a belief put forward in 15 per cent of the answers. Simply stated: ‘if we are in a position to do so, we should help.’¹²²

The idea of impartiality, another pillar of ICRC’s philosophy,¹²³ also belongs to this ethical position. Not only are refugees human beings and therefore deserving of help, but they are also entitled to equal rights. Sentences such as: ‘they deserve the same treatment as us no matter were [sic] they are from’¹²⁴ demonstrate what Nussbaum (and also the Universal Declaration of Human Rights¹²⁵) asserts, namely the equality of all human beings and consequent rejection of differences on the basis of nationality, ethnicity, etc.¹²⁶

As respondents were able to see refugees as human beings, they could also imagine themselves in the refugees’ place. 10 per cent of participants identified their responsibility to act as a response to the possibility that one day it might be them needing help. In other words, the process of perspective-taking engaged the moral duty to help.

This emphasis on our shared identity as human beings seems in contrast with Broome’s theory, according to which we are so attached to our cultural baggage that empathy cannot help us see another person’s situation. It also appears to contradict De Turk’s conviction that dominant groups tend to universalise their experiences.¹²⁷ This strong belief in

114 See Section 4.3.1 of this paper.

115 TV 117, Student of Green School, Bali, Indonesia, 21 May 2018.

116 L Chouliaraki and T Stolic, ‘Rethinking Humanity and Responsibility in the Refugee ‘Crisis’: A Visual Typology of News Media’ London School of Economics and Political Science <<http://www.lse.ac.uk/media-and-communications/assets/documents/research/projects/media-and-migration/Chouliaraki-and-Stolic-Refugees-Visual-SUBMISSION.pdf>> accessed 4 October 2019.

117 The concept of Nussbaum’s cosmopolitan community is based on the idea that citizens are not loyal to a single state government, but rather bound by a sense of respect for humanity: M Ayaz Naseem and E J Hysop-Margison, ‘Nussbaum’s Concept of Cosmopolitanism: Practical Possibility or Academic Delusion?’ (2006) 15(2) *Paideusis* 52.

118 Cited by D S J Hollenbach, ‘Borders and Duties to the Displaced: Ethical Perspectives on the Refugee Protection System’ (2016) 4(3) *Journal on Migration and Human Security* 149.

119 TV 117 (n 115).

120 J Pictet, ‘The Fundamental Principles of the Red Cross: Commentary’ (1979) <<https://www.icrc.org/eng/resources/documents/misc/fundamental-principles-commentary-010179.htm>> accessed 4 October 2019. Hereinafter: ICRC.

121 TV 919, Student of Green School, Bali, Indonesia, 21 May 2018.

122 TV 915, Student of Green School, Bali, Indonesia, 21 May 2018.

123 Pictet (n 120).

124 VR 014, Student of Green School, Bali, Indonesia, 21 May 2018.

125 Universal Declaration of Human Rights (10 December 1948), U.N.G.A. Res. 217 A (III) (1948).

126 Hoffenbach (n 118) 150.

127 See Section 2.2.3 of this paper.

a community of equal human beings might be the consequence of having run the study in international schools that have a strong focus on global citizenship. The fact that cross-referencing the answers to this question with nationality data showed this attitude is spread across the board supports this hypothesis. At the same time, it also proves that a type of education aimed at forming global citizens is effective in eliminating cultural barriers.

If cultural differences did not pose an obstacle, neither did physical distance.¹²⁸ By contrast, the dominant attitude was that awareness of the refugees' situation brought out the same moral obligation as physical proximity, thus making it impossible to ignore the duty to lend a hand: 'We can't just watch over this as we travel all around the world not even thinking about those who simply can't even go home.'¹²⁹

4.2.2 *The empathy-altruism hypothesis*

'They are the same species as us, it is our duty to help other humans, no matter how different we think they are. I want to help them.'¹³⁰

One of the aims of the present study is to link the idea of responsibility to that of agency by asking the following question: 'If you agree that we should help refugees, what do you think you could do?' This component of the project attempts to explore the empathy-altruism hypothesis. According to this, empathy can lead to altruism, understood as 'a motivational state with the ultimate goal of increasing another's welfare.'¹³¹ Because of this, fostering empathy can have very positive repercussions on improving societal attitudes towards stigmatised groups and therefore be employed not only in education about refugees, but in all areas dominated by hostility towards refugees.

In order to test the empathy-induced altruism hypothesis, Batson ran several experiments in which he used variables to see how a person might achieve the goal of helping. Among these, there was also a manipulation normally referred to as the 'viability to escape.'¹³² Escape does not allow participants to achieve the goal of helping in an altruistic manner, instead it enables them to distance themselves from the empathic arousal they have experienced.

The analysis of this set of answers searched for strategies employed by respondents to escape. This was a necessary passage in order to discover how many participants limited their involvement after feeling empathy during the viewing of *Step into a Refugee Camp* and *Clouds Over Sidra*. Refusing to answer or giving an impersonal reply were interpreted as attempts not to engage on a personal level with the idea of helping. These findings showed 19 per cent of participants chose not to answer or were not sure what to answer, thought that helping refugees was not their responsibility, were concerned not everybody had the means to do so or attributed the duty to intervene to the government.

Other examples of 'escape' were impersonal replies that amounted to 26 per cent of the total. Among these were many political answers indicating that countries should open their doors to refugees or offer them opportunities and jobs. While these were valid choices of help, they did not demonstrate any form of personal engagement.

By contrast, 56 per cent of the replies contained some form of personal commitment. In this context, by 'personal' is meant all the answers containing the pronouns 'I' and 'we' and those starting with an infinitive verb replying directly to the question – for instance 'send them', 'visit them', etc.

The strongest type of engagement included wanting to connect with refugees either by visiting and helping them in first person or by hosting them. Some respondents had a very personal approach to how they would commit themselves, thinking of how they could help in the specific context of their life. For instance, a participant wrote he was creating a company with the intention of giving some of the profits to refugees because his 'company thinks that everyone deserves a fair chance in life.'¹³³ Another participant wanted to become a journalist and document the refugees' situation.¹³⁴ A final example was the commitment of one student to start looking online for a charity specifically dealing with refugees or getting involved in some refugee project once back in her mother country.¹³⁵

Not surprisingly, 47 per cent of participants went for what one of them defined as 'the easy option'¹³⁶ – the one most accessible, and perhaps realistic for young people still in school: making a donation.

Another concrete way to help put forward by participants was to spread awareness. Their comments revealed the experiences they went through in the study were eye-opening and instilled in them the desire to share what they had learned to the point that 22 per cent chose this as their contribution. Last, a minority of participants also showed their belief in making their voice heard in order to exercise their influence on the government. After learning about the experience of refugees, 4 per cent indicated actions such as protesting and signing petitions as ways to convince their government to have a welcoming attitude towards refugees.

128 Physical distance as an obstacle, for instance, was mentioned only by student 728 of Green School, Bali, Indonesia, 23 April 2018.

129 808, Student of Green School, Bali, Indonesia, 23 April 2018.

130 715, Student of Green School, Bali, Indonesia, 23 April 2018.

131 Batson, 'Empathy-Induced Altruistic Motivation' (n 54) 3 and De Waal (n 48). See also Section 2.2.2 of this paper.

132 Batson, 'Empathy-Induced Altruistic Motivation' (n 54) 10.

133 805, Student of Green School, Bali, Indonesia, 23 April 2018.

134 URG 112, Student of Green School, Bali, Indonesia, 21 May 2018.

135 VR 114, Student of Green School, Bali, Indonesia, 21 May 2018.

136 816, Student of Green School, Bali, Indonesia, 23 April 2018.

4.2.3 Conclusion

The experiences of *Clouds Over Sidra* and *Step into a Refugee Camp* triggered a form of responsibility based on the ideas of our common humanity, equality and impartiality. In an era where examples of international cooperation are increasingly few and far between, this disregard for differences such as nationality, sovereignty, ethnicity, etc. seems remarkable and perhaps is the consequence of the international environment within which the respondents were based.

The question of whether this kind of responsibility can actually lead to altruistic action can also be answered affirmatively as 56 per cent of respondents showed some level of personal willingness to help. Hence, this result validates the empathy-altruism hypothesis.

Linking these results directly with those of the previous section, clearly demonstrating that *Clouds Over Sidra* was more effective in fostering empathy, we now have a substantial argument as to why VR should be used to educate about refugees. As this section showed, the empathic reactions elicited by VR have the potential to lead to altruism. Because of this, VR could become a real catalyst for improving societal attitudes towards refugees. Therefore, it seems reasonable to recommend that VR experiences be embedded in educational curricula aimed at teaching empathy. Nevertheless, it is also important to point out that definitive conclusions on the connection between VR-induced empathy and altruism could only be reached if participants could be followed over time. Only in that case would it be possible to verify whether exposure to experiences similar to the one in this study does translate into action.

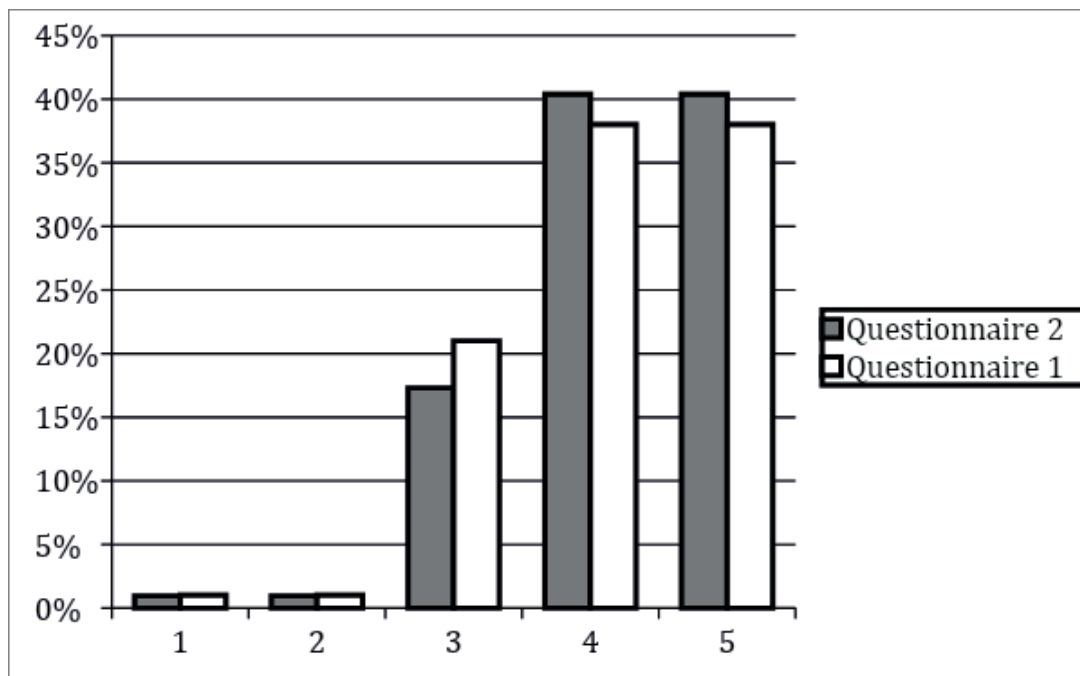
4.3 Part 3: Before and after

Questions about the meaning of the word 'refugee', what to take if forced to flee and whether we are responsible for refugees were designed to compare participants' attitudes before and after undergoing the VR experience of *Clouds Over Sidra* and watching the video *Step into a Refugee Camp*. For this reason, they were added to both the first and second questionnaires. This strategy aimed to establish a benchmark in order to draw some further conclusions on the impact of the study.

4.3.1 The question of responsibility

One of the questions intended to assess the effect of *Clouds Over Sidra* and *Step into a Refugee Camp* concerned the sense of responsibility felt by the respondents towards refugees. It was formulated as follows: 'Do you think it is our responsibility to help refugees?' Participants could choose between the values of 1 (strongly disagree) and 5 (strongly agree).

As the chart shows, the two questionnaires present very similar results – the only slight differences concern an increase of 2 per cent in the number of students who chose the value 4 and 5 and a decrease of 4 per cent in those who selected 3.



Due to the fact that 76 per cent of participants had already chosen 4 and 5 in the first questionnaire, the room for growth was quite limited. These results might therefore be a sign the experience of the two videos had no effect on the respondents or was a confirmation of the opinion they already had.

4.3.2 The meaning of 'refugee'

The other section of the questionnaire aimed at measuring the effect of the two experiences involved questions about the meaning of the word 'refugee' and the items participants would grab if they had to flee in a hurry.

Prior to conducting this study, participants were not provided with any material about refugees. It is nevertheless highly probable some of them covered the topic during their classes or came across it through reading or watching news reports, since 93 per cent of them showed a very good grasp of what 'refugee' meant. This might also be a consequence of the fact that 50 per cent of the participants answered affirmatively to the question: 'Have you ever met a refugee?'

4.3.2.1 Results – Identifying with refugees

69 per cent of respondents correctly identified the component of 'being forced' in the definition of refugee. This is an essential element that contributed to the students' openness to receiving the content of the two videos. As explained in the section on empathy, any empathic reaction can be influenced by factors such as responsibility and controllability. In this case, the recognition that refugees were forced to flee and therefore not responsible for their own situation enhanced the possibility of empathising with them.

This openness led to 34 per cent of respondents reacting empathically to the experiences of Sidra and the refugees in *Step into a Refugee Camp*. Their answers in the second questionnaire clearly showed they went through a process of identification with the refugees in the videos. Although these replies do not represent the majority, it is still relevant to analyse this result given that being able to identify oneself with another is a definite sign of empathy.

Such a process of identification becomes evident from how the answers were re-worded in the second questionnaire. One of the most noticeable changes was the passage from lexical definitions – 'a refugee is...' – to more personal answers. This is exemplified by the respondents' choice to include what they felt in response to the two videos by adding expressions such as: 'I feel really bad', 'I think it is really unfair', etc. (14 per cent). This display of concern for other people's experiences can be read as a consequence of feeling empathy for them.¹³⁷

Not only were the participants' feelings mentioned, but also those of the refugees. Sadness came up in 28 per cent of the answers, followed by fear (6 per cent) and hope (6 per cent). Next to the refugees' feelings, some of their qualities, such as braveness (8 per cent) and strength (14 per cent), were also mentioned. Moreover, their situation stopped being described as matter-of-fact displacement. Instead, the emphasis was put on the experience of 'having gone through a lot' (14 per cent). This was also echoed by the preoccupation with the consequences of the flight rather than the reason(s) for it – for instance 19 per cent of answers were focused on the refugees' loss of opportunities (including education).

Echoing the results of the previous section on responsibility, 10 per cent of participants discovered a shared identity with refugees. In this context, it was expressed through the realisation that refugees are 'normal people', 'just like us' who have feelings, are part of a family and have dreams and hopes. For example, the notion of refugees fleeing in order to protect their families and children appeared in seven entries in the second questionnaire versus one in the first.

4.3.2.2 Discussion

Overall, these results confirm the theory that coming into contact with somebody – even through technological devices – hearing their side of the story, seeing where and how they live and learning about their daily struggles, is a very effective way to foster empathy as it allows for a deeper level of identification.¹³⁸ While the within-subjects method does not allow attribution of these findings to either *Clouds Over Sidra* or *Step into a Refugee Camp*, the discussion in Part 1 of this section demonstrated that VR is particularly advantageous in helping viewers identify themselves with refugees because it places them into the scene, gives them the feeling of 'being there' and the freedom to move around and look in all directions.

The role VR might have played in the reformulation of 34 per cent of the refugee definitions is also explained by how information is absorbed through this platform. The section 'Fostering better understanding' showed that VR triggers a process of learning based on both emotional and cognitive empathy. This offers an elucidation as to why some participants changed their answers about the definition of refugees by including the human side of what it means to be forced to leave one's home.

Combined with the findings on responsibility and cosmopolitan ethics, the re-wording of the refugee definition also validates Allport's contact theory, which asserts that 'people... just need a chance to get to know each other and that once this happens, individuals will soon discover that beneath the mantle of group identity rests a much deeper and common identity – that of a human being.'¹³⁹ Although originally this mainly referred to personal contact, the theory now comprises modern technologies, including virtual ones.

Finally, while the experiences of *Clouds Over Sidra* and *Step into a Refugee Camp* most definitely had an impact on the participants' understanding of what it means to be a refugee, at the same time it is possible that the way this

137 See Anderson (n 61).

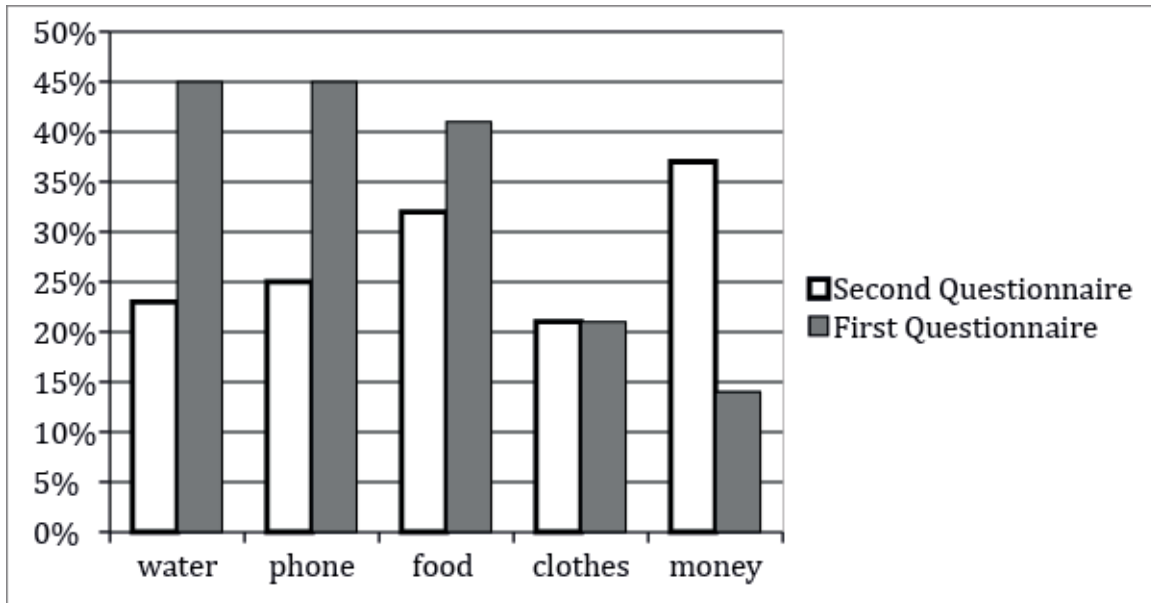
138 See Eisenberg, Eggum and Di Giunta (n 56).

139 Head (n 51).

question was formulated might also have influenced the students into re-elaborating their answers. Especially, the introduction 'After going through this experience...' might have misled some respondents into thinking they had to change their answer.

4.3.3 Items to grab

The chart below represents the items most frequently mentioned in the two questionnaires.



Interestingly, only 22 per cent of students gave the same reply in both questionnaires. This might be simply because they did not remember exactly what they answered in the first questionnaire, but also because the videos might have highlighted some new needs they had not considered before. This exercise was in fact aimed at making participants imagine themselves in the situation of a refugee.

Answers that deserve particular attention are those that mentioned personal items such as pictures, books, sports equipment, etc. These saw an increase from 21 per cent to 36 per cent. While in the first set of answers, personal items mainly included books (26 per cent) and pictures (43 per cent), in the second questionnaire they expanded to comprise toys/games (33 per cent) and, more generally, items 'that contained a memory', 'that reminded [them] of home', etc. (23 per cent).

Such answers were clearly influenced by the content of the two videos. While prior to undergoing the two experiences – *Clouds Over Sidra* and *Step into a Refugee Camp* – students were primarily focused on fulfilling physical needs, after listening to Sidra and the interviewees in the video, they seemed to have a better understanding of the emotional consequences of displacement.

4.3.4 Conclusion

The quantitative comparison of the sense of responsibility experienced before and after watching the videos did not reveal any noteworthy variations. By contrast, the other two questions presented interesting data. Regarding the meaning of 'refugee', over one third of the answers were changed to reflect a different understanding, involving a sense of identification as well as an appreciation for the human dimension of the refugees' situation. This more personal interpretation was further reflected in the choice of which items to take, which in the second questionnaire included more memory-related objects. Unfortunately, the adoption of the within-subjects design did not allow attribution of these findings to either one experience or the other. Therefore, in this specific context, it was not possible to make conclusive remarks on the effectiveness of VR versus the multimodal video in fostering empathy.

5. Conclusion

The analysis of the data collected during this research project demonstrated how the immersive qualities of VR enhanced the content of *Clouds Over Sidra*. This led to the conclusion that overall the VR experience proved more effective at evoking empathy. It also lent support to the theory that empathy can induce altruism and therefore help improve attitudes towards refugees. On the basis of these findings, compelling content that utilises VR is a recommended addition to school curricula or other programmes aimed at education about refugees. The final aim of this education is to promote a better integration of newcomers into receiving communities by encouraging a deeper understanding of refugee experiences.

Despite the many advantages offered by VR, it is nevertheless important to stress it cannot be an 'empathy machine' on its own as it is only a technological platform that needs quality content in order to deliver its full results. It is therefore crucial to continue working towards understanding and recognising these factors in order to produce VR content with real potential to foster empathy. As Murray has suggested, 'we should look for the specific moments that point to the genuine promise of the medium in creating compassionate understanding, and build on those.'¹⁴⁰ In consideration of VR's potential to offer an augmented experience, academic research has an important role to play in providing an analytical evaluation and critical assessment of content to be used through the medium of VR.

As the discipline of refugee studies evolves in response to external stimuli, it has to broaden its scope to include not only refugees, but also communities hosting refugees. Without the consideration of both sides of integration, refugee studies will not be able to contribute to current debates and stay policy-relevant.¹⁴¹ The discussion of VR and empathy undertaken in this study is an instance of how this field can branch out into other disciplines and find creative solutions to realise its goal of 'combining scholarly research and theorising with advocacy and practice aimed to ameliorate the plight of its objects of study'.¹⁴²

Consequently, this project is an attempt to offer a practical and empirical recommendation based on methodologically sound research to the topic of education about refugees. Empathy is indeed a key component in the process of integration as it can lead to altruism and VR has proven effective in eliciting it. However, while this paper is focused on education about refugees, these findings could be applied to many other areas where attitudes towards refugees need improving. The hope is this research project will inspire others to explore further and find new areas to implement these findings.

140 Murray (n 75).

141 See L B Landau 'Can We Talk and Is Anybody Listening? Reflections on IASFM 10, 'Talking Across Borders: New Dialogues in Forced Migration' (2007) 20(3) *Journal of Refugee Studies* 335.

142 Schmidt (n 21).