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Suborbital Space Tourism: Doozy Experiences Beyond Earth

Minna-Maarit Jaskari, Marie-Nathalie Jauffret, and Hannele Kauppinen-Räisänen

1 Introduction

This chapter focuses on the emerging field of suborbital space tourism, which involves suborbital space flights lasting about two hours, which allow travelers to experience high speed, five to ten minutes of weightlessness, and a view of Earth from space.

Past space tourism studies contribute with knowledge on consumers' motivations (Kim et al., 2023; Laing & Frost, 2019), interests (Gianchino et al., 2021), the role of personal involvement, motivational factors, and risk perceptions (Wang et al., 2021), and public opinion regarding the sustainability of space tourism (Toivonen, 2022). That said, these studies have focused on space tourism by surveying potential travelers or travelers showing an interest in space tourism (e.g., Kim et al., 2023; Olya & Han,

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2023). Despite the contributions of past studies, little is known about the experiences of actual space travelers.

The study presented in this chapter builds on two yet-to-be-understood issues. First, our study adds to the literature of space tourism by focusing on travelers' experiences, including their expectations, hopes, and fears related to space tourism. With a focus on experiences, the underlying premise is that experiences occur in various phases of the entire journey. Past research shows that each of these phases—pre, during, and after—plays a crucial role in shaping the holistic travel experience (Björk & Kauppinen-Räisänen, 2016; Helkkula, 2011; Lemon & Verhoef, 2016). Second, by focusing on a unique sample of individuals—actual space travelers—our study advances the literature by providing insights from firsthand space travelers. To the best of our knowledge, there are few earlier studies focusing on individuals who could genuinely be classified as space travelers. Hence, our study offers valuable insights from a unique cohort of travelers who have demonstrated a genuine commitment to space travel by actually purchasing tickets.

With its roots in prior discussion, this chapter delves into the experiences of actual space travelers, focusing on their experiences along the entire journey.

To meet the study aim, we designed a qualitative study using mixed methods. For exploratory purposes, we conducted in-depth interviews with three space travelers. These interviews are particularly insightful as they encompass a range of experiences, offering a diverse perspective on how travelers experienced the entire journey. To add to these interviews, we analyzed publicly accessible interviews with six space travelers who have participated in suborbital space flights. Then, to validate the findings, we reviewed archival data.

With the selected approach, the study contributes with several insights. First, it contributes with an insightful understanding of the unique circumstances of space travel and the lived experiences of the travelers during the entire journey. We also introduce the concept of "doozy tourism" to illustrate the specific nature of space tourism, which we characterize as being a niche of luxury tourism. At its best, luxury space tourism is built on creativity, excellence, and exclusivity in accordance with the definition by Cristini et al. (2017). Third, the study contributes to the literature of experiences by showing how experiences within space tourism consist of four phases. The first two phases—the signing of the contract and the prolonged waiting period—comprise the pre-phase. The

next two are the core flight and the post-return phase. The study also contributes with managerial implications, which attempt to guide further development of space tourism, and the services provided by the luxury tourism sector. This includes crafting unique and memorable travel experiences, taking into consideration the entire space voyage, including its prolonged pre-phase.

The rest of the chapter is organized as follows. First, the theoretical framework is presented. It elaborates on space tourism, existing research on potential space travelers and their interest in undertaking a space flight, and the construct of experiences. It then discusses the study design and presents the findings. The chapter ends with conclusions and suggestions for future research.

2 Space Tourism and Reasons to Travel in Space

2.1 Space Tourism and Its Various Forms

Conquering space has been one of the dreams of humankind. The first milestones in the conquest of space are the flight of a dog (1957), a monkey (1961), a human Yuri Gagarin (1961), and Apollo 11 (1969). Since then, space tourism has evolved to be accessible for both professional and non-professional astronauts (e.g., Futron, 2002). The first paying space traveler was officially announced in 2001, when Dennis Tito crewed together with a professional astronaut and spent a week aboard the International Space Station (ISS) (*Time Magazine*, 2022). 2021 was a landmark year for space tourism with several successful suborbital space flights. Virgin Galactic, Blue Origin, and SpaceX were among the key companies providing more accessible flights marketed to a broader public (Grand View Research, 2023).

A suborbital space flight lasts about two hours, including five to ten minutes in weightlessness, priced at about USD 450,000. While suborbital flights are cheaper than orbital flights to the International Space Station, space travel remains exclusive and the most expensive mode of transportation (Abeyratne, 2013; Hobe, 2007). Despite its prestige pricing, it is predicted that advances in suborbital flight will lead to an increase in space tourism through declining prices and an expansion in accommodation in space (Futron, 2002). The vision is that commercial space tourism will become a reality thanks to technological advancement and a rising trend in individual adventure-seeking even if its sustainability

is questioned (Cohen, 2017; Peeters, 2018; Toivonen, 2022). This trend is also seen in market size forecasts. The global space tourism market was valued at USD 695.1 million in 2022 and is expected to reach USD 815.7 million in 2023. It is expected to grow at a compound annual rate of 40.2% from 2023 to 2030 to reach USD 8,669.2 million by 2030 (Grand View Research, 2023). The growth potential is clear: So far, only dozens of travelers have flown to space, but according to Statista (2021), 49% of United States adults would want to travel to space if money was not an issue.

Space tourism can be defined as commercial space travel for leisure and recreation characterized by the experience of weightlessness and celestial observation (Chang, 2017; Cohen & Spector, 2020; Zhang & Wang, 2022, p. 372). Space tourism can take various forms and is typically divided into terrestrial space tourism, atmospheric space tourism, and astrotourism.

Terrestrial space tourism includes activities on the ground and virtual space experiences. For example, Finnish Lapland is a popular destination to witness the Northern Lights and explore the universe using the naked eye. Also, scientific organizations and entertainment businesses, such as the Kennedy Space Centre or Future World at Disneyworld, frequently provide this type of tourism (Wang et al., 2021).

Atmospheric space tourism includes excursions to Earth's atmosphere, such as zero gravity flights or high-altitude flights, while *astrotourism* includes journeys in and beyond Earth's orbit. (Cater, 2019; Crouch, 2001; Toivonen, 2022). Within astrotourism, there are three types of orbital space tourism: *orbital*, *suborbital*, and *beyond orbital*. Orbital journeys have a longer duration, require higher speed, and operate a "few hundred miles above Earth's surface" while being extremely expensive. Extensive weightlessness, a possible stay at a space station, and multiple sunsets and sunrises as the space station orbits the Earth might all be included in this experience. Suborbital space tourism involves short visits to 50–70 miles above Earth, typically above the so-called Kármán line. The experience involves a few minutes of weightlessness and the sight of the Earth against the blackness of space. These journeys require less speed and are less expensive than orbital travel, and will thus be the most prominent area for space tourism in the coming years (Clash, 2022; Kim et al., 2023). Finally, travel beyond orbital space goes even further and may include experiences such as circling the moon or even flights to the Moon and Mars (Crouch, 2001; Toivonen, 2022). While acknowledging

the broad scope of potential activities within space tourism, our study limits itself to commercial suborbital space travel.

2.2 Reasons Inspiring Interest in Space Tourism

Research on individuals who could genuinely be classified as space travelers is practically nonexistent. Instead, past studies have focused on potential travelers who are interested in space travel. In doing so, previous empirical studies have identified various traveler segments and not only a range of reasons inspiring potential travelers' interest in space travel, but also reasons hindering interest in such tourism.

Space travel appeals to certain types of individuals. For example, Reddy et al. (2012) identified two distinct types—extreme sports enthusiasts and wealthy leisure travelers—while Kim et al. (2023) characterize various types of travelers interested in orbital and suborbital space tourism. According to them, young, educated, professional males comprise the main target group for orbital space tourism whereas older, married, high-income individuals define the suborbital group. This is unsurprising, given that although both types of space travel demand an adventurous mindset and substantial financial resources, an orbital flight imposes greater physical health requirements. Indeed, Masson-Zwaan and Freeland (2010) suggest that space tourism is tailored for a group of travelers who are willing and able to accept the associated risks. Similarly, Mehran et al. (2023) found that space tourism is particularly appealing to individuals who are drawn to risk-taking and seeking novel experiences. To conclude, past studies highlight the existence of distinct segments: from extreme sports enthusiasts to wealthy leisure travelers, and from young, educated professionals to older, high-income individuals at quite a general level.

Various reasons are found to drive interest in space tourism (e.g., Giachino et al., 2021). First, the "vision of earth from space" appears as the most important reason to potentially travel to space (Futron, 2002; Reddy et al., 2012; Wang et al., 2021). Second, potential travelers are driven by interest in "the experience of weightlessness," or "zero gravity," that is, the physiological sensation associated with space travel. For example, Reddy et al. (2012) found that 44% of the British respondents identified weightlessness as a very important motive to travel to space. Third, potential travelers are motivated to embark on a space journey due to a desire for unique and thrilling adventures. This desire includes

exploration of new areas, being at the forefront of new endeavors, accomplishing feats that have never been done before, and experiencing the excitement of the unknown and testing one's own limits (Chang & Chern, 2016; Mehran et al., 2023). In the published studies on potential space travelers, the highlighted motivations for traveling to space include the desire to experience something unique and unusual (Wang et al., 2021), the unusual nature of the experience (Reddy et al., 2012) and the experience of high speed (Reddy et al., 2012). "Uniqueness" may include actions such as "riding a spacecraft" or "being able to walk in space" (Wang et al., 2021). Within the field of space tourism, this uniqueness is combined with adventure and excitement, high risk, and even danger. Typically, potential travelers value "the experience of excitement" or "thrill" (Futron, 2002; Laing & Frost, 2019; Wang et al., 2021) (Table 1).

In addition to issues motivating potential travelers to consider a space flight, research has uncovered what discourages interest in such tourism. Not surprisingly, the main reason limiting interest in this experience is its high price (Chang & Chern, 2016). Another main set of reasons hindering space travel typically consists of danger and safety concerns. For example, Reddy et al. (2012) found that risk is the primary reason why potential tourists would not be willing to travel into space, which is consistent with earlier research (Wang et al., 2021). Indeed, space tourism is intended for a distinct and limited group of individuals who have the means and are willing and able to embrace certain risks, particularly those who are risk-takers and novelty seekers (Giachino et al., 2021; Mehran et al., 2023).

There seems to be a limited number of studies focusing on not only actual space travelers, but also on exploring travelers' experiences, including their expectations, hopes, and fears related to space tourism. The following section attempts to define the multifaceted nature of the construct of experience, and explicitly experiences within tourism.

2.3 The Multifaceted Nature of Tourism Experience

The concept of experience—as gained through travel, for instance—is complex and has many different aspects. Essentially, experiences can be categorized along a spectrum ranging from extraordinary to ordinary (Björk & Kauppinen-Räisänen, 2016). Extraordinary experiences encompass those that are perceived as unusual, distinctive, and novel (Arnould &

Table 1 Summary of the main findings of the earlier research on potential space travelers' motivations to travel to space

Author(s)	*Purpose*	*Empirical context*	*Findings*
Kim et al. (2023)	The study examines what factors make consumers participate in orbital and/or suborbital space tourism	A questionnaire was carried out with respondents who wanted to participate in orbital (n = 332) and suborbital (n = 332) space tourism in the future	Both intrinsic and extrinsic motivation have a positive impact on intention to participate in space travel. The two types of space tourism have very distinct characteristics
Gianchino et al. (2021)	The study investigates the views of younger generations towards space tourism	Combination of qualitative and quantitative data. Northwestern Italy. Focus group, survey, n = 2027	Highlighted an interest in space tourism, although motivated by different reasons, levels of budget and sustainability aspects. Interest in space tourism varies according to the extent to which it is perceived as potential, possible or sustainable, or to people's personal feelings
Wang et al. (2021)	The study investigates factors that affect enthusiasm for becoming a suborbital space tourist among those who are interested in space exploration and, at the same time, are younger and educated	US, online survey, n = 166	Most important motivations: a quest for unique experiences, excitement, seeing the beauty of the Universe, and making a scientific contribution

(continued)

Table 1 (continued)

Author(s)	*Purpose*	*Empirical context*	*Findings*
Olya & Han (2020)	This study investigates the triggers and concerns of behavioral intentions of potential space travelers	Survey, US, online panel, n = 370	Although motivations appeared as sufficient and necessary antecedents, risk antecedents play a dominant role such that risks can diminish the effects of motivations in shaping the desired behavioral intentions of space travelers
Laing and Frost (2019)	The study investigates the motivations of potential space tourists	Qualitative, interviews with four proposed space tourists conducted, as well as an analysis of four published interviews with two individuals who had flown to the ISS as space tourists: Mark Shuttleworth and Greg Olsen	Four types of motivations identified: hedonic motivations (such as thrill-seeking or risk-taking), eudaimonic motivations (such as challenge, curiosity, spirituality, and nostalgia), and extrinsic cases (such as seeking distinction or a desire to motivate and assist others)
Reddy et al. (2012)	The study examines the perceptions of potential space travellers' motivations, behaviour and decision-making	Self-administered survey with quantitative and qualitative questions. Ordinary people, South England, n = 164	Reasons to travel: Vision of Earth from space, zero gravity, unusual experience, high speed experience, scientific contributions. Reasons not to travel: too risky, enough destinations on earth, environmental concern, health problems
Futron (2002)	The survey examines the demand for space tourism	Market research, 450 telephone interviews, survey	80% of respondents are interested in space travel. Reasons to travel: being a pioneer (24%); seeing Earth from space (15%); lifelong dream (12%); space enthusiasm (7%); other (25%). Main reason not to travel was the cost

Price, 1993), while ordinary experiences pertain to those that are considered common, which potentially occur on a regular basis and may even be routine (Carù & Cova, 2008).

The concept of a tourism experience is often described as the interplay between the routine of daily life and the different extraordinary worlds that we encounter while traveling. This interplay or interaction is particularly visible when there are changes in the usual temporal and spatial structures that people are accustomed to (Binkhorst & Den Dekker, 2009). For example, when travelers visit various places, they seek authentic, rewarding, meaningful, multisensory, and even transformative experiences (Hosany et al., 2022). Some researchers point out that people seek experiences for the means of self-fulfillment and self-actualization, such as to fulfill a lifelong dream, sometimes originating from childhood (Futron, 2002; Reddy et al., 2012).

Experiences are multifaceted in nature, as they involve mental, emotional, physical, social, and sensorial factors (Becker & Jaakkola, 2020; Kauppinen-Räisänen et al., 2013). They are also defined to be subjective, situational, and contextual (e.g., Becker & Jaakkola, 2020; Carù & Cova, 2008; Kauppinen-Räisänen et al., 2013). In the context of tourism, this means that travelers' values, beliefs, interests, backgrounds, past experiences, and expectations lead to different experiences of the same tourism offering. It also means that the same traveler may experience an activity differently at various points in time, and also implies that the setting influences how an event or activity is experienced and perceived. This view highlights how experiences are co-created through interaction (Campos et al., 2018; Jaskari, 2023; Kauppinen-Räisänen et al., 2019).

3 Methodology

In order to gain an understanding of committed space travelers' experiences, we designed a qualitative study using mixed methods. Our approach combines three one-to-one interviews, analysis of published interviews with six space travelers, and archival data.

3.1 Data Gathering

Our one-to-one interviews consist of three interviews with space tourism customers who have bought a ticket for a suborbital space flight, thereby demonstrating their commitment and engagement with space travel. All

three bought a ticket from Virgin Galactic. One of the participants has completed the flight (Namira Salim, Astronaut 019) and one has been waiting since 2010 and is expected to fly in 2026 (Vesa Heilala, Future Astronaut). Although the third ("Claire") eventually canceled her purchase, our interview with her provided a unique opportunity to explore experiences of the waiting period.

Participants for the study were recruited utilizing personal networks as well as public media channels. The group comprises two females and one male, representing a diverse array of cultures including French, Monégasque-Pakistani, and Finnish. Notably, two participants identify as Monégasques, citing their residency in the Principality of Monaco as a significant aspect of their identity. This diversity ensures that the interviews conducted outside the traditional realm of press and media relations offer a variety of unique perspectives on the experiences associated with space tourism.

The interviews were carried out in the Principality of Monaco and Finland during the autumn of 2023. Each interview session varied in length, lasting anywhere from 30 minutes to an hour. Adopting an open and discursive approach, the interviews primarily centered on the interviewees' personal experiences with space tourism. For the purpose of thorough analysis, each interview was transcribed and translated into English. Notably, Claire, who was reimbursed for her ticket, expressed a wish to remain anonymous and thus a pseudonym is used. She prefers not to leave any personal trace online regarding her space tourism experience. We closely followed the websites of the two other interviewees in order to gain insight: www.namirasalim.com and Vesa Heilala's blog "*The Finnish Astronaut: Dream—Wish—Opportunity*." Table 2 summarizes the background information from the three one-to-one interviews.

Our data also consists of public accounts by six space tourists. Four of them have taken part in Virgin Galactic flights, through Mission: Galactic 02 or 03, and one flew on a SpaceX Crew Dragon. Combined with public websites, their accounts allowed us to gain rich insights into the actual experiences of space travelers in different phases of their journey, while the various sets of data also served a validating purpose. Table 3 summarizes the background information on these six space tourists.

Before conducting the interviews, we participated in a conference held by an international space travel organization in the Principality of Monaco, where we had the opportunity to meet various professionals in the field. During this event, we collected a range of materials

Table 2 Background information from one-to-one interviews

Name / pseudonym	*Gender*	*Country of birth*	*Country of residence*	*Background*	*Type of interview*	*Social media and websites*
Astronaut 019 Namira Salim	Female	Pakistan	Monaco	Bought ticket in 2006. Took part in Spaceflight Galactic 02 on 10 August 2023, being the first Pakistani woman to fly to space	Face-to-face	https://www.namirasalim.com/ https://www.instagram.com/NamiraSalimOfficial/?hl=fr
Future Astronaut FA1 Vesa Heilala	Male	Finland	Finland	Ticket bought in 2010, first expected to fly in 2013, now expecting to fly in 2026	Face-to-face online	www.suomalainenastronautti.fi https://www.facebook.com/SuomalainenAstronauttiVesaHeilala
Former future astronaut Claire (pseudonym)	Female	N/A	N/A	Ticket bought in 2013, cancelled the flight in 2015	Face-to-face	N/A

Table 3 Background information and public accounts use of six actual space tourists

Space travel company	*Name of the astronaut*	*Nationality*	*Background*	*Data sources used*
Virgin Galactic space travelers	Astronaut 011 Jon Goodwin	UK	One of the first to sign up for a space flight. He competed in the 1972 Olympic Games. Flew on Spaceflight Galactic 02 on 10 August 2023	https://www.virgingalactic.com/virgin-galactic-astronauts https://www.ynetnews.com/article/bycrqtm2h
	Astronaut 012 Keisha Schahaff	Antigua & Barbuda	Flew on Spaceflight Galactic 02 on 10 August 2023	https://www.virgingalactic.com/astronaut-bio-keisha-schahaff https://www.bbc.com/travel/article/20230830-whats-it-like-to-win-a-trip-to-space https://www.youtube.com/watch?v=XcrDuHS36Ys
	Astronaut 013 Anastatia Mayers	Antigua & Barbuda	Flew on Spaceflight Galactic 02 on 10 August 2023	https://www.youtube.com/watch?v=XcrDuHS36Ys https://www.virgingalactic.com/astronaut-bio-anastatia-mayers
	Astronaut 014 Ken Baxter	USA	Flew on Spaceflight Galactic 03 on 8 September 2023	https://www.virgingalactic.com/virgin-galactic-astronauts https://www.youtube.com/watch?v=-tb2BUmFsqA

(continued)

Table 3 (continued)

Space travel company	*Name of the astronaut*	*Nationality*	*Background*	*Data sources used*
				https://web.archive.org/web/20080127132016/
Mission SpaceX Axiom	Mark Pathy	Canada	A businessman who travelled to the International Space Station for 10 days	https://www.youtube.com/watch?v=sKOpxBH2XRE https://www.lapresse.ca/actualites/2022-07-02/un-montrealais-dans-l-espace.php
Soyuz TMA-16	Guy Laliberté	Canada	Businessman and founder of Cirque du Soleil. Wanted to be "the first clown in space" Travelled to the International Space Station on 30 September 2009	https://montrealgazette.com/entertainment/theatre/guy-lalibert-docks-safely-at-the-international-space-station https://www.youtube.com/watch?v=Lpe8dkpKK3U

to gain a deeper understanding of the procedural aspects of space tourism. Engaging in face-to-face conversations with space professionals and astronauts, we conducted pilot interviews to comprehensively grasp the context of space tourism. These discussions also helped us gather insights into the process and test the terminology commonly used in the space tourism sector. We also conducted an industry interview with the President of SpaceLand. These experiences significantly bolstered our preparations to collect qualitative international data. Finally, we gathered a diverse set of archival data including, for example, media texts and TV programs about space travel in order to gain deep contextual understanding.

3.2 *Data Analysis*

The data underwent an abductive qualitative content analysis, adhering to the methods outlined by Miles and Huberman (1994). Initially, the English transcriptions of the interviews were read multiple times to capture the essence of the overall experiences of the interviewees. Each author conducted a preliminary analysis, focusing on the intriguing aspects of the interviewees' experiences and their unique ways of expressing ideas and thoughts. This initial approach allowed us to analyze the data with an open mind, starting from the ground level. Following that, our initial interpretations were discussed collaboratively, leading to a more targeted analysis guided by specific research questions.

First, the interviews were scrutinized with "what" and "how" questions to uncover the nature of the interviewees' experiences and how they explained their thoughts and feelings. This technique enabled us to construct case narratives (Sect. 4.1), where the core elements of each experience are presented in narrative form. The core narratives were compared and enriched by using secondary data from the interviewees' websites. The case narratives have been approved by the interviewees. In the subsequent phase, we expanded our data to encompass public interviews with six space tourists. This data was analyzed with a focus on their lived experiences along the various phases of the journey. This stage of the analysis enabled us to verify the two pre-phases of the four phases encompassing the entire journey (Sect. 4.2).

4 Findings

4.1 *Narrative Experiences by Three Space Travelers*

In this section, we delve into the narratives of three distinct participants. Each narrative is intended to enable readers to deeply immerse themselves in it and vividly experience the journey. By giving voice to our participants, we highlight the unique aspects of each case, emphasizing the personalized nature of space travel experiences, and thereby enriching the reader's understanding of this extraordinary field. These narratives have been constructed from one-to-one interviews and supplemented by secondary data.

The three narratives reveal that all three share a passion for space that began in childhood and which they have pursued throughout their lives in activities such as their studies and hobbies. For all of them, space travel

was a dream that they wanted to turn into reality. This passion for space was also evident to their peers: Families, friends, colleagues, and other people all knew about their passion. Their peers supported their passion wholeheartedly. However, when they made the commitment to travel to space, e.g., they bought their ticket, sometimes their peers were worried about the safety of their loved ones.

4.1.1 The Passionate Astronaut Namira

It was a dream for me. It is my DNA. As a child I was always dreaming of going to space. Then, as a teenager, I was very confident—I told everybody in my family I was gonna go to space, that I would become an astronaut. I didn't know how I'd become an astronaut, but I just believed in it. If you want to make your dreams come true, the most important thing is to believe in them strongly.

My parents always knew that, so when I was 14, my father bought me a telescope. I was the first female member of the first Astronomy Society of Pakistan. Among my other studies, I studied art and used space as my inspiration. Space has been my whole life.

It was in 2005 that I found out that Richard Branson was going to create a spaceline—the first in the world—to take people to space. When I saw the news at home, I immediately called Virgin Galactic and said that I wanted to buy a ticket. I was the first person from Pakistan and the first person from Monaco.

I wanted to keep it private. We didn't do any press releases. But surprisingly, after buying a ticket, I was introduced to the entire Pakistani nation of 230 million people. As Namira Salim, I was the first Pakistani astronaut. So, it's like a major dream come true for a little girl growing up in Pakistan, not in America.

My mother was worried and thought it wasn't safe. My parents wanted to stop me, but I didn't listen to them.

My friends whom I went to school with were so proud of me because I've been on the front page of the news in my country. I couldn't believe it; it was an emotional experience as well. What kind of headlines? In Pakistan, it was "she made history," "she has gone to space," "she actually comes back to space," and "she is safe, she is back," "she took the flight." Everybody, including my family, feels that I made our country proud!

4.1.2 The Expectant Astronaut Vesa

Ever since I was a child, traveling to space has been my dream. My fascination began with the colorful pages of *Avaruusmatka* comics, enthralling episodes of *Star Trek*, and the captivating universe of *Star Wars*. I still vividly remember Christmas when I got a Lego rocket at the age of seven. That was the spark that ignited my lifelong aspiration to journey beyond our atmosphere.

I bought my ticket for a space flight back in 2010. At that time, I was led to believe that my turn would come in 2013. I bought my ticket from the travel agency, and got a lot of publicity. I've been interviewed several times on television and in the newspapers. I remember being interviewed for the first time, and the response was overwhelming. My website, which I had set up to chronicle my journey, got over 100,000 page views in a single day. Messages poured in from friends and strangers alike, some expressing surprise, others offering their support and sharing in my excitement. But my friends—they were not surprised. For them, it wasn't news at all that I was the one to buy the ticket.

Space travel hardly ever sticks to the timetable, and it's the same with my trip. I've used this time not only to feed my curiosity but also to engage in related activities. I've had the opportunity to visit SpacePort America, meet Branson briefly, try a centrifuge, have a beer with an Apollo astronaut, and visit interesting places and meet interesting people. All these experiences have brought me closer to the reality of my dream. I've also been involved in the CanSat project, which allows me to work on miniature satellites—a small-scale version of space exploration.

I'm still waiting for my turn. I've counted that I should be on flight number thirty-five. Despite the delays, my excitement hasn't waned. I look forward to the day when I'll witness the Earth from a perspective few have had the privilege to see—the profound darkness of space, the vibrant colors of our planet, the sensation of speed, and the thrill of the unknown.

4.1.3 The Cautious Astronaut Claire

Ever since I was a child, I've wanted to be an astronaut. I've always had a love of space. I take pictures of stars all the time. I want to see the curve of the Earth. That's what I want to see. The curve of the Earth. Through my own eyes.

I bought a ticket in 2012. And I was supposed to officially fly three years later. I could've been the first one in my country. I could've been

the first of my gender and my age. I had the possibility, and it was a good opportunity for people like me who were never able to become professional astronauts.

I went to visit SpacePort America in 2013. There was an official presentation of the shuttle with Branson and all the registered future astronauts. We were all there, almost all the people who were registered. At least a hundred. There were a lot of space lovers, as expected. Of course, they are different kinds of persons: All were space lovers, but like everywhere also there was a little bit of pretentiousness. I realized once I signed up that this could bring me other things. The link with other space lovers and a network, yes, also a business network, of course, as always. I'm still in contact with some of those who are still registered.

Except, that in 2014, the shuttle exploded during the last test phases. Then my family started to get a little scared and I'd always said that if there's someone in my immediate family who doesn't feel comfortable with this, I wasn't going to go there. They were too scared for me. That is why I cancelled.

From the beginning, I didn't want to have anything to do with publicity, I didn't want this to be known. But then my name leaked in the press. It turned into carnage. I had the media calling every day. I found myself on the front page of many newspapers, with conspicuous headlines. It hurts. I was just doing it to pursue my passion. Then death threats were sent to me, my family, and my friends. I had to go back to live with my parents because being all alone in my apartment wasn't safe. It lasted more than six months. I think it was because of my age and maybe my gender. There was another Frenchman who'd sold his house to buy the ticket. He was never bothered.

I love space. There isn't a trip that I take without looking at the phases of the moon to find out if I can take pictures of stars. If tomorrow you were to tell me that we must go spend a week in space, on Mars, I'd leave tomorrow.

4.2 Experiences in Different Phases of Space Travel

Past research stresses that experiences occur in various phases of travel—before the journey, during the core journey, and afterwards—each playing a crucial role in shaping the holistic travel experience (Björk & Kauppinen-Räisänen, 2016; Helkkula, 2011; Lemon & Verhoef, 2016).

In our study, all participants stressed that the pre-phase stage is divided into two phases, one of which is the prolonged waiting period. Hence, our study adds to the existing knowledge on experiences by revealing that they occur in four essential phases which all contribute to the overall travel experience.

4.2.1 The Phase of Contract Signing—Ticket in Hand

The first step in the travel process is characterized by the traveler's signing of the travel agreement, which marks the decision-making point. This step is significant because it demonstrates the traveler's engagement and commitment in the space journey. For early travelers, the decision to buy the ticket seems to be quite straightforward. As Vesa explains: "*In 2010, it was announced that the first trip had been sold. A friend called me, asking if it was me. No, it wasn't. Then I immediately went and bought a ticket. I thought they would sell out. A week later, it was announced that a second trip was sold.*" In a similar vein, Namira acted quickly to pursue her dream: "*I found out that Richard Branson is gonna take people to space. I was in my apartment when I heard about it. I immediately called Virgin Galactic and I said that I want to go to space.*"

This stage involves various emotional reactions from family and friends, but also a number of financial and insurance considerations. For example, Namira's and Claire's families were concerned about their decision, while Vesa's friends merely asked him if he was the holder of the first Finnish ticket. In our data, financial and insurance considerations were mostly discussed in connection with the unfortunate space shuttle accident. To illustrate, the accident caused stress to Claire, as her family became concerned about her safety and her financial advisor suggested that it would be better to invest the money in something else.

4.2.2 The Phase of Waiting—Commitment at Stake

The second phase occurs after the contract has been signed and the ticket purchased—an extended waiting period for the core space flight, experienced by all our study participants. This phase is characterized by the travelers' commitment—on the one hand to the process and on the other hand to the forthcoming flight. In this stage, the travelers visit the site, meet the staff, and get a close-up look at the spacecraft. This stage is susceptible to adjustments due to technical or logistical changes. In essence, this phase embodies a unique and multifaceted aspect of the journey, filled with varying experiences.

A veteran astronaut, Jon, spoke about the long amount of time he spent on the waiting list, highlighting the lengthy and uncertain path to space travel. "*I have been waiting for 18 years,*" he said, illustrating the significant commitment and patience required in the pursuit of this extraordinary venture. For Jon, his health and its potential impact on his space travel became an issue of concern when the waiting time became longer and longer. He revealed a personal health struggle: "*I contracted the disease [Parkinson's], I thought that's the end of me going into space.*" Indeed, health issues can lead to cancellations of purchased tickets during the long waiting period.

Travelers also expressed substantial concerns regarding the technical safety of space travel. Due to the long waiting time, these issues become particularly significant for some. However, another traveler, Mark, was confident and explained how he felt: "*I looked at who the people at Axiom were, what their capabilities were for getting people safely to and from space, and I was impressed. I'm not a daredevil. I'm adventurous but I don't have a death wish. I have a young family and I'm looking forward to seeing them grow up. I wouldn't be doing this if I thought there was a meaningful risk of this not working out.*"

Some travelers stated that the waiting period provides unique and memorable experiences thanks to events and happenings that might not have been held without this long wait. Vesa, who has been waiting since 2010, ponders: "*If this trip had happened in 2013, as I was led to believe, would I have walked 100 km? Would I have entered the Wife Carrying World Championships? Would my rocket car be in this shape? I can't say. And I don't know if I would've met a living Apollo astronaut and had a beer with him. I don't know. Because these things have happened during this waiting period. Plus, I've met many other astronauts and all kinds of things. And read more about these topics.*"

An important aspect is that because space tourism is still in its early stages, it receives significant media interest. Media treatment of these travelers has varied; for some, media attention has felt like an honor, while for others, it has become an emotional burden. Indeed, the uniqueness of space tourism becomes evident in the way the media have shown interest in the space travelers, while the relationship of the travelers with the media seems to vary. To illustrate, once the media found out that Claire had bought a ticket, her house was tagged, and she received insults and even death threats. She had to move out of her house for some time. On the contrary, when the media found out that Namira had bought a ticket, the

media celebrated her as a pioneer who was making her country proud. It is evident that at this moment, media and public reactions can have a positive or negative impact on space tourists.

This prolonged pre-phase, a hallmark of space tourism in its current state, goes beyond mere preparation for space travel; it becomes a distinct journey in itself. For many, it is a time of life-changing experiences—personal development, unexpected achievements, and emotional preparation for the upcoming space journey. Indeed, the long waiting period has shaped Namira's, Vesa's, and Claire's experiences in different ways. To begin with, they all visited SpacePort America—this made the wait more exciting, but the waiting period, and the events held during it, in one case even caused them to rethink their commitment to the trip. Public and media reactions during this time also add layers of complexity, ranging from overwhelming support to overbearing scrutiny. Thus, this phase—which is often overshadowed by the space flight itself—plays a crucial role in shaping the space travelers' experiences, revealing the complex and detailed nature of waiting and the different ways it changes the lives of people who are going to space.

4.2.3 The Stage of Pre-launch Activities and the Core Flight

The third stage encompasses the core flight and necessary pre-launch activities, such as getting fitted for suits and attending technical briefings, all of which contribute to mounting excitement as the launch approaches.

Certainly, the astronauts felt a profound sense of excitement and wonder when they received confirmation that they had been selected for an upcoming space journey. To illustrate, Ken recalled his reaction, saying, "*I was blown away when he called me back on his cell phone,*" highlighting the unexpected nature of his selection. Similarly, Sebastien shared his disbelief, exclaiming, "*It was crazy! I couldn't believe it,*" which underscores how surreal he felt when he heard the news.

During the core flight experience, space travelers encountered moments that felt magical and transcendent. Jon, who struggles with severe health conditions, shared his sheer astonishment during the journey: "*It is completely unreal for me to go into space … the experience exceeded my wildest dreams.*" Keisha experienced a profound sense of peace and freedom, reflecting, "*It was just a great escape getting off our planet, a great adventure. To see our Earth just sitting there in this peacefulness, just so Zen—it was just the biggest peace that you can find out there … For me, it was really a place of tranquility, a place of freedom,*

a place of connection." Similarly, Ana's first look out of the spacecraft's window was intensely emotional: "*I remember that the first time I turned and looked out the window, I almost panicked. It was just such a huge thing that, for a second, I didn't know how to really process it. It was just unbelievable. My emotions were all over the place. There was no fear, but there was a lot of confusion*."

The examples above illustrate the overwhelming and transformative nature of their space travel experiences. Only a few of the interviewees mentioned difficulties during the experience, such as sickness. Yet, Mark, who took part in a longer voyage, a 10-day mission to the International Space Station, explains: "*It was difficult, sleeping in space. There are no visual cues to know if it is day or night, so it affects the circadian rhythm …. When we arrived at the station, I was completely disoriented. I wasn't feeling well. I felt sick. For the first few days, I had pain in my back due to microgravity and I had a headache*." Some of the astronauts were aware of the typical bodily reactions and expected to feel nauseous because "*it is obvious*" (Claire).

Reflecting on their subjective experiences, travelers described their space journeys as spiritual and even transformative. Namira articulated this as involving "*a spiritual connection,"* a sentiment that Keisha deepened by describing space as "*a spiritual place."* Beyond spirituality, Namira also experienced a sense of romance, while Guy perceived it as "*poetic*." Anastatia expressed a profound connection and unity with the cosmos, saying, "*I have a place in the universe."*

The varied expressions highlight the deeply personal impact and growth that resulted from the unique and extraordinary experience of flying to space.

4.2.4 Upon Return—A Traveler Altered Forever

In the final stage—upon landing—the space travelers expressed that they experienced a profound array of emotions, encompassing not only psychological aspects but also physiological ones, signifying a pivotal shift from their remarkable adventure to a transformed daily existence.

Ken, for instance, described his reactions upon landing as "*almost breathtaking,"* highlighting the intense and overwhelming impact of the journey. After the flight, the tourists often found it challenging to articulate the intense emotions they'd experienced, as Ken explained: "*There are no words that can explain looking down at the Earth."* Similarly, Keisha

struggled to express her feelings: "*Beyond. Beyond. I don't have the words about how I actually felt about it. It is just huge*."

In accordance with the second stage, returning from the space flight also attracted significant public attention and acclaim, resulting in social recognition. To start with, all space travelers and their pictures are presented on the Virgin Galactic website (https://www.virgingalactic.com/virgin-galactic-astronauts) and found on several websites. The experiences of the space travelers are acknowledged and celebrated in the media, marking them as individuals who have accomplished a remarkable feat. Most of the travelers participated in interviews, sharing their stories locally, nationally, internationally, and on digital platforms. This media engagement highlights the importance of their journey in the larger social context. A notable example is Namira, who expressed gratitude for the warm reception and the prestigious civil award she received, highlighting the esteem and recognition bestowed upon her by her country for her space endeavors.

These findings reveal how space travel leaves an indelible impression on the individual, not only through personal transformation but also through social acknowledgment, bridging the gap between individual experience and collective recognition.

5 Discussion—Space Travel as Doozy Tourism

Commercial space tourism companies encapsulate the hallmarks of luxury, positioning themselves firmly within the luxury tourism industry (Kapferer & Valette-Florence, 2018; Toivonen, 2022). Building on Cristini et al.'s (2017) definition of luxury, space tourism can be characterized by its creativity, excellence, and exclusivity. The essence of space tourism, driven by technological progress and innovations, primarily lies in its creativity, fostering a novel perspective on environmental interaction. The fundamental premise of space travel is a comprehensive commitment to excellence, ensuring safety and additional benefits for travelers. Moreover, space tourism is defined by the exclusivity marked by its limited availability and premium cost, restricting access to a distinct group of individuals, which all define luxury (e.g., Cristini et al., 2024; Gummerus et al., 2023; Kapferer & Valette-Florence, 2018).

However, the concept of luxury in space tourism is complex and multifaceted (Christini et al., 2024; Iloranta, 2022). The financial barrier, currently around USD 450,000, means that the experience is out of reach

for most people—it is aligned with certain luxury criteria such as quality, aesthetics, and heritage. For instance, the state-of-the-art technology of the spaceships and astronauts' descriptions of the beauty of space add to its luxury appeal. However, our findings illustrate that travelers view their experience not in terms of luxury but as a personal journey of happiness, joy, and self-fulfillment. Also, when they described their experiences, they focused on awesomeness and a sense of personal triumph, highlighting the sense of wonder sparked by these experiences. Moreover, despite its high cost, which indicates prestige, the experience lacks certain luxury elements like comfort and individual attention—it could thus be debated whether it could in fact be classified as a luxury.

Given these unique characteristics and the blurred lines between luxury and space tourism, a new term is justified. This term should encapsulate the exclusive, emotional, and experiential aspects of space travel, as distinct from traditional luxury concepts. Therefore, in this study, we introduce "doozy tourism" as a distinctive term to encapsulate the profound and unparalleled essence of space tourism. This choice is inspired by the consistent description of the experience as incredible, outstanding, and rarely accessible, offering emotions seldom encountered anywhere. While space travel could be considered as unconventional adventure tourism (Cohen, 2017; Iloranta, 2022; Toivonen, 2022), doozy tourism pushes the experience even further combining extraordinary and exclusiveness with risks and danger. Moreover, instead of exhilaration and adrenaline increase, doozy tourism can be about self-development, knowledge and pushing one's limits.

Doozy tourism embodies an awe-inspiring journey that fulfills deep-seated dreams and passions, pushing individuals out of their comfort zones into the realm of unique, unknown experiences. It involves the magical opportunity to witness Earth from an exceptional vantage point and to delve into the mysterious depths of black space. This term captures the transformative nature of the journey, where travelers engage in profound self-discovery and memory-making, and embraces the unspoken emotional magnitude of the experience, marked by its intensity and the lasting impact on personal fulfillment. Furthermore, "doozy" reflects the creativity ignited by this adventure, as many interviewees express a desire to immerse themselves in new space-related projects after their return from the trip.

In essence, the term "doozy" summarizes the space travel experience as amazing, remarkable, unique, and intensely extraordinary, echoing the unanimous sentiment expressed by space tourists.

6 Conclusions

The study reported in this chapter responds to the need for more empirical research on space tourism, as highlighted by Reddy et al. (2012) and Zhang and Wang (2022). Focusing on actual, committed space travelers rather than potential travelers with an interest in space tourism, our research provides in-depth insights through three one-to-one interviews. These interviews, selected to explore the impact of prolonged waiting on travelers' experiences, reveal that fulfilling a childhood dream is a key motivation for these pioneers. Additionally, the interviews shed light on how the extended waiting period influences traveler behavior. The analysis is further enriched by six publicly available interviews and archival data, enhancing our understanding of the actual space experience and the personal, spiritual, and social responses following the flight.

Recognizing the importance of the pre-phase stage as a distinct journey in itself, space tourism companies should focus on enhancing this period for their customers. This prolonged waiting period offers a unique opportunity for companies to delight their customers by engaging with them through personalized experiences, learning opportunities, and exclusive events that build excitement and a sense of community. By investing in these aspects, companies can transform the waiting period from a passive wait into an integral part of the space tourism experience. Additionally, managing public and media interactions carefully during this phase is crucial, as these can significantly impact the travelers' overall experience and perception of the journey.

Our findings reveal how space travelers view their experiences as embodying the essence of doozy tourism—a construct that encapsulates an amazing, remarkable, unique, and intensely breathtaking travel experience. This form of tourism reconciles elements of wonder, extraordinariness, and impressiveness. Doozy tourism is characterized by endless happiness, personal triumph, and a profound sense of joy.

Our study represents the first effort to contribute to a more precise understanding of what doozy tourism entails in the context of space travel. Future research could potentially categorize other exceptional and rare forms of tourism in a similar vein.

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