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Table of Contents

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RESEARCH ARTICLE

Thinking Imaginatively via Generative Vitality in Tourism Studies (After Deleuze)

Keith Hollinshead[1]

Abstract

This manuscript covers the commonplace restrictions of institutional thought within 'tourism' and 'the field of Tourism Studies'. It critiques Deleuzian ideas concerning the contretemps between emergent and open forms of nomadic conceptuality and established (or dogmatic) images of dominant understanding. In providing a synthesis of the Deleuzian conceptualities of rhizomatic thought, it offers three important and refreshing *planes of thought* on (i) the limitations of institutional 'knowledge'; (ii) the constancy of life as 'becoming'; and (iii) the brooding juxtaposition between the actual and the virtual. Thereafter, it builds up to six open 'Deleuzian paths' for reflexive action for those who work in travel, tourism, and related-mobilities. These *personal considerations* address the conceivable need in Tourism Studies for critical cartographies that suit the posthuman and interversal imperatives of today which demand an understanding which is often 'otherwise' and 'spiral' in its conceptual trajectory. Together, the six reflexivities constitute a Deleuzian call for researchers/practitioners in Tourism Studies to resist the hegemonic forces of mere 'knowledge-production' that *tend all-too-easily to deny creative and unfettered 'thinking'.* The manuscript thus seeks to widen the affirmative possibilities of thinking about the world and its different peoples, its different places, its different pasts, and its different presents.

Keywords

Tourism judgments, Deleuzian ontology, becoming, thinking otherwise, relationality, palpation

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Nomadic Logic for Studies of Travel, Tourism, and Related Mobilities, and for Fields 'Beyond'

The French philosopher (and in many ways, anti-philosopher) Gilles Deleuze was a broad-minded conceptualist whose thoughtlines — often issued in tandem with his co-national, the psychoanalyst Felix Guattari — oxygenated thinking and practice in science, literature, and the arts (amongst many other things) during the 1970s/1980s/1990s. This manuscript seeks to examine the manner in which the writings and the political activism of Deleuze pungently brought new insights and fresh-to-different awareness into the disciplinary domains and institutional fields he inspected and which he sought to liberate from the crippling hegemony of over-fast domesticated perspectives and under-thought 'knowledges'. This manuscript here in the *Journal of Tourismology* thereby seeks to translate the thoughtlines of Deleuze to *the dogmatic images of thought* (his own term, there) that conceivably overcode or restrictively-authorise visions of the world in contemporary practices of tourism and travel. It is offered as a vital reflexive tribute towards more open and more fertile (or generative) imagination about the peoples, places, pasts, and presents which are encountered through the industrialised nomadicisms of global travel, and of the multiple (but so often under-recognised) ontological relationships which exist between them. The paper therefore queries the open-ness of the thinking (and, likewise, the constipated understandings) that regulates what gets seen and 'known' through tourism.

In this light, this paper provides an introduction to Deleuzian (or rather, to *Deleuzoguattarian*) conceptuality on both institutional thought and germinal life — notably with regard to the worldmaking agency and authority of tourism and Tourism Studies. It seeks to illustrate such dynamic Deleuzian thoughtlines by providing three planes of thought which colour in palpative Deleuxian conceptuality on rhizomatic ★ matters of becoming.

[Note: ★ = a rhizome is that unpredictable mix of connections between what might at first appear to unrelated or dissimilar objects, people, ideas and the unusual, unexpected, irregular chains that link such things together, however ephemeral that association may be (Young, Genesko, and Watson 2013). See Colman on how Deleuze and Guattari — in their philosophical praxis (Deleuze and Guattari 1987:12) — deploy the concept to follow such process of "networked, relational, and transversal thought without 'tracing' the construction of that map as a fixed entity" (Colman in Parr: 2013:232-3). For Bogue (1990:107), rhizomes are non-hierarchical random multiplicities "which cannot be subsumed within a unified structure" in contrast to arborescent (tree-like) totalities which tend to be hierarchical and stratified with limited and regulated connections.]

In providing this illumination into the strong Deleuzian view of the limitations of contemporary social theory and disciplinary knowledge, this paper here in the *Journal of Tourismology* [hereafter: JT] culminates in the provision of six reflexive points by and through which those who research or work in travel and tourism, and related fields (and by extension, those who work in a or any domain or discipline in the social sciences cum humanities) can identify the axes of domination that constrain their imagination about the world, and through that learning and unlearning can help them fruitfully towards more creative visions of life in human and nonhuman realms, on towards a more fluid and discerning understanding of 'multiple realities' and of 'multiple possibilities', something that Britton (1991) critically demanded three decades ago, and which Behassen and Caton (2009) and Robinson and Jamal (2009) called for one decade or so ago.

It is important that those who work as researchers in Tourism Studies or as practitioners in tourism management and tourism development think about these Deleuzian matters of 'becoming' because they relate to projections of 'being' and 'difference' that are articulated every day in a banal and mundane fashion through tourism and travel, here, there, and everywhere (Bauman 2003; Adey, Bissell, and Urry 2010). Indeed, tourism could be said to be the business of difference-declaration, difference-making, difference-concretisation par excellence as it defines places and spaces and as it declares how particular peoples, places, pasts, and presents ought to be seen, or can be seen (Buck 1993; Kirshenblatt-Gimblett 1994; Rothman 1994; McKay 2009). Thus, in probing these nuanced Deleuzian matters, this manuscript seeks to reflexively question **the quality, the tenacity, and the artfulness (or otherwise) of the foundational knowledges** that those who work in quotidian fashion in Tourism Studies monger and peddle each day, each week, each month, in the academy, across the field, within the journals, and at the conferences. The paper thereby stands as an important warning about **unthought essentialism** — i.e., about the unthinking naturalisation of 'things' and the unthinking normalisation of populations, territories, inheritances, events, whatever, through tourism and Tourism Studies (refer here to Richter 1995; Clifford 1997). Tourism is conceivably the world's most virulent declarative agency for labelling subjects-in-the-world (Horne 1992; Mavrič and Urry 2009). It is critical that all who work in senior positions in the industry or in the field's research scholarship inspect how places and spaces are not so much ordered by foundational understandings but pre-ordered by it (Franklin 2009; Hollinshead and Ivanova 2013) by the authoritative signifying primacy of 'tourism'. It is cardinal that those senior incumbents in the field take on board reflexive Deleuxian considerations on the worldmaking power they routinely exercise (Hollinshead and Caton 2017; Hollinshead and Suleman 2018) as — let us be clear about it — they work as 'tourism judges' about the world's visitable histories, cultures, natures, and spiritualities (Thomas 1994; Hollinshead and Kuon 2013). This need for reflexive vigilance is no small imperative. Every senior player in the field must learn to regularly think about what Deleuze would term the constrained or enabled 'generative vitality' of the people-making orientations, the place-making narratives, and the past-making assumptions they industrially or scholastically deal in (Saxena 2015 [on the need to cultivate Deleuzian approaches in Tourism Studies]).

Introduction — Thinking Creatively / Thinking Spirally / Thinking Otherwise:

Three Illustrative Deleuzian 'Planes of Thought'

The three planes of relatability cum connectivity will now be illustrated in order in terms of the intercessive imagination-opening and animating (and often counter-actualizing) potential of travel and tourism, as **provoked** by Deleuzian philosophy:

Plane-Of-Thought 1:

There Is Always More To Know

To repeat the point, Deleuze is not a philosopher that hunts for conceptual stability in and of things, for (paradoxically) to him the function of philosophy is not to settle things but **to disturb them** (Deleuze and Guattari, 1994: 2). In his view, philosophy cannot uncover everything and put all things firmly in place in any setting or scenario, for there is always more going on than one can ever see or roundly contemplate in every locale and in every context: there are always other things going on outside of or beyond our own codification of and about the world, whomever we are. "There is always something more, more than we can know, more than we can perceive" (May, 2008:171, on Deleuzian outlooks on the world). Accordingly, the ontology of Deleuze is never complete, and like Foucault (his fellow French thinker on knowledge, power, and discursivity), he recognizes that what so often appears to be natural and irrevocable is — contrary to such expectations — historical and contingent. Hence to Deleuze, the objective of philosophy is not to closely capture and scrupulously delineate 'difference', but (again) **to palpate it** conceptually (refer to May, 2008:20, here, on the necessity to 'palpate' things, ideas, and/or events that cannot readily be comprehended). Thus Deleuze searches for fresh concepts which usefully and contextually feel for suspected 'difference', and touch upon it or sense its presence and its possible shape(s) (plural) and its imaginable linkages (plural). To Deleuze, assessments of things that are seemingly comprehensive are dangerous and perhaps (probably?) overdetermined. Once more, to Deleuze, it is not 'knowledge' that should be regarded and esteemed but 'thinking', viz., continuous, and vigilant thinking about the world and its multiple spheres, its multiple layers, its multiple happenings: "there is always more to think" (May 2008: 21, on Deleuzian infinite-multiplicities and infinite-connectivities) in each and every milieu, at each and every 'event', at each and every junction.

Plane of Thought 2:

All Life Is Constant 'Becoming'

In Deleuze's judgment, the major misapprehension of Western thought is that it starts from entities which are presumed to exist as concrete things and which are located or 'known' at a point of reality where they 'transcend'. In contrast to such intact and consummate 'things', Deleuze critiques the forces that first produce those held realities or hailed terrains be they cultural, political, whatever (or rather be they rhizomatic interactions of culture with politics, or with whatever else) (Buchanan, 2000). Thus, for Deleuze, life is an ongoing process of interaction and connection as such forces constantly mutate and intersect here, there, and everywhere. In his view, the relationship of people, of things, of ideas, with the world is always dynamic — i.e., it is one of ceaseless change and abiding flux where any such interaction or connection can generate a lines-of-flight through which (for instance) people can be recreated or otherwise recreate themselves. Indeed, to Deleuze, human life is inherently creative, influenced by rhizomes and lines-of-flight which are incidental and propagative, but which i-m-p-o-r-t-a-n-t-l-y are *not* foundational (Colebrook, 2002:52). These rhizomata (and the influences and the changes they help occasion via particular lines of flight) exist on a plane of immanence which (to him) is always multiform, open, and protean. Yet, to repeat a point, this immanence (these immanences) — these complex and dynamic acts of **becoming** — are not generative of some fixed 'being' or solid 'entity', for they tend to lack uniformity and homogeneity, and (significantly) they do not work towards any particular end-point or culminatory goal.

What always intrigues Deleuze — for living things — are the ways in which such beings are able to develop 'experience' from these influences of flux and these acts of 'becoming', and this he terms 'contraction' (Colebrook, 2002:35). But this contraction does not produce 'essences', per se, for to Deleuze **it is the multiplicity of relations and the latent possibilities of becoming that ought to be deemed to be 'essential' and not 'the thing' or 'anything' itself**. To Deleuze, then, life is a matter of interacting codes and influences, *and all life is thereby potentially productive*. Such irruptive encounters and such incursive experiences through 'becoming' force people to think, and thought itself can be creative as the given people connect and reconnect with other things and/or with other forms of life and/or with other ideas or images on these multiform planes of immanence or along these empowering or inaugerative lines-of-flight. Thus, while humans can thereby transform themselves through these acts of happenstance becoming, *it is thought itself* which can roam and 'slip' beyond established strata to become nomadic and proliferating. Hence, to Deleuze, 'life' is always opportunistically fertile and potentially productive, and 'thought' is thereby always fecund and potentially generative. And to him, life is always a mix of active multiplicities — relating to intensive forces of change (Roffe, in Parr 2013: 181/2).

Plane of Thought 3:

There Is No Distinction Between The Actual And The Virtual

To Deleuze, there is no merit in suggesting there is a real world out-there which we simply perceive and then axiomatically represent. He salutes not the image *of* something for the observer, but the act of seeing (viz., the seeing sensation itself (Colebrook 2006: 102)). To him — following Bergson (see Bergson 1988, [first published 1908]) — the actual (world) and the virtual (world) in fact constitute a *co-presence* and are tightly imbricated presences within and amongst each other. Thus, to Deleuze, **both the actual AND the virtual are 'real'**, and images and representations are no mere copy of a or the actual world but are themselves actual-virtual matter, for (to him) there is no difference between an image and a thing.

To clarify this important matter, under Deleuzian understandings, the virtual is thereby real without being present, and ideal without being abstract (Bogue 1990: 42). Said another way, the virtual is 'real' in that it subsists rather than exists, and it has *extra-being* rather than mere being (Bogue 1990: 59). In this Bergsonian light (to Deleuze), the virtual is thereby real but not actual (De Landa 2012: 227). While an envisioned possibility is merely "a pale and imagined version of the actual world, virtual difference [i.e. the virtual] and becoming is [rather] the very power of the world" (Colebrook 2003: 97). Consequently, to Deleuze, life is best seen as or mostly-richly-understood as a virtual multiplicity of not so much things or definite objects but of contemplations about the world and of imagined 'contractions' of events in the world and of responses to the world. It is these contemplations that subsequently create, produce, make distinct but-always-changing human beings and distinct but-always-changing objects. Hence, under Deleuzian thoughtlines, "there is not a world (actual) that is *then* represented in images (virtual) by the privileged mind of man (the subject). **Life is just this actual-virtual interaction of imaging** … [and] anticipation goes beyond what is actual [and thereafter] also produces a new actual. The image is neither actual nor virtual, but the interval that brings actuality out of the virtual" (Colebrook 2003: 87-88; emphasis added).

Hence, to Deleuze the real is not an actual substance which is then captured or regulated through virtuality, it is more properly seen (in each and every place) to be a something that is assumed to be 'different' from the teeming virtual realm around us. For Deleuze, the mind is thereby just a kind of camera that has prehended (*not* 'comprehended' here!) the world at a single juncture of time, and the images which the mind 'arrests' or 'produces' then act upon the world and upon each other, consequently generating and/or consuming further 'represented' (or rather further 'real') actual or virtual entities.

Through these views, Deleuze suggests that **there is no distinct and concrete domain which is then perceived and represented via the virtual domain as if**

there is always and everywhere an actual, distinctive, and rigid divergence between 'the actual' and 'the virtual'. Hence (to him) actual subjects do not precede a or any virtual perception: the virtual realm of sense exists alongside and is indeed dovetailed with the actual realm of so called 'being': thus, this virtual realm indeed constantly acts upon and influences what other philosophers (or other ordinary individuals) might consider to be the realm of actuality. To Deleuze, virtuality is thus no pale version of the real (Colebrook, 2002:172), and it exists *as an open and positive domain of inhuman power* itself — an important point for Deleuze (1990) — which then acts upon people via art, via fantasy, via whatever, amongst a plenitude of other influential 'signs', 'codes', 'systems', and 'series' which are embedded in (for instance) biology, genetics, history, politics (Colebrook, 2002:xliii).

To Deleuze, **the virtual is a province of unfulfilled potentiality which is constantly syncopated with the actual to produce a dynamic rather than a static world**, where each active perception (and each unrealized or not-yet-realized perception) is only a 'fold' (or a creative possibility (Deleuze, 1993)). In this light, the whole world may best be seen as *a virtual expanse*. And this 'virtual expanse' may be both a range of where (institutionally) illusions of thought dominate (i.e., a plane of transcendence (Deleuze and Guattari 1994)) and a reach of virtuality where new possibilities of becoming and new fluxes of experience lie latent (i.e., a plane of immanence). In this regard, **sense is not something that deduces what is already actually 'there' in the world, it is something that appraises possibilities of 'becoming' as it opens out towards the virtual**. To Deleuze, the virtual has primacy in its juxtaposition with the actual, for *the actual is but a contraction of all of these multiple virtual possibilities* (Deleuze and Guattari 1987). And the proper sense of freedom is that understanding of and engagement with virtual potentialities which currently reside beyond current dominant outlooks over the world.

Under this embrace of the virtual, meaningful interpretations of 'difference', ipso facto, ought not then to be seen as those distinct characteristics which patently exist between already-recognized concrete-entities but rather as intensified possibilities which potentially exist between the sum total of palpable becomings. The problem for Deleuze (and for Deleuze and Guattari under joint Deleuzoguattarian valuations) is not only that so much of 'the virtual' is not recognized or is unperceived, but that virtuality itself is so commonly demeaned and not considered important under so many existing dogmatic institutional cum disciplinary cum en groupe knowledges. Even the past is seen by almost everyone — notably under Western dogmatic interpretations — as something that actually happened (i.e., as thereby something that is factually knowable rather than as a particular interpretation wrought from the infinite gamut of possible interpretations of 'becoming'). Significantly, the Bergsonian and Nietzschean influences that reside within Deleuze clearly posit the past as nothing other than 'something perceptive' and thereby *not* as an actuality that can be decidedly 'known'. Accordingly, to Deleuze, the past is a virtuality that can indeed be roundly or specifically thought about and which can therefore be potentially 'retrieved' and activated in the imagined present, and for the imagined future, or indeed amongst other imagined versions of the past (Colebrook, 2002:170).

Recap: Tourism and difference: Deleuze and the need to constantly palpate both actuality and (especially) virtuality

In his richest paradoxical vein, Deleuze maintains that substance is no constant entity nor fixed quality, it is a 'thing' (or amalgam of forces) that folds, unfolds, and refolds in ongoing fashion (O'Sullivan, in Parr 2013: 107-108). Thus, to Deleuze, substance is not a constant identity there to be regularly perpetually affirmed: 'it' is not a or any being, 'it' is *becoming* (Stagoll, in Parr 2013: 25-27). In this regard, Deleuze (1990) rejects the Platonic view — i.e., the outlook that there are original beings which may subsequently become or be stimulated — that has driven so much received philosophy (Stagoll, in Parr 2013:27). To Deleuze, **there is no such fundamental being anywhere or anytime, but a constant immanence of becoming**, where 'becoming' (without a or any concrete grounding or a or any absolute foundational to things) is all there is (May 2008:61). Constantly, Deleuze does not value becoming over being, he significantly abolishes the opposition between them.

In this light, 'becoming' is thereby 'difference' which is yet to be actualised into specific identities (May 2008:60). Thus the future — or aspirational or adventitious potential — is not a limited or relatively empty void regulated by the unity of a fixed identity, it is full-to-overflowing possibility (Colebrook 2003: 46-49). Accordingly, what matters to Deleuze is not the actuality of an essential identity (and what ought to be known and labelled about 'it') but rather **the substantive *virtuality* that lies behind and within that identity, or rather, those possible identities, plural** (May 2008:61). Thereby, the multiplicity of the future is always with 'us' each, here and now. In like vein, to Deleuze, the past is part of every present. And to him, the future is part of every present. Ergo, there is always more to know about the force of the past (which contested pasts?) upon the present … and there is always more to know about the force of the future (which political futures?) upon the present. Consonantly, under his Bergsonian influences, time is always a subjective matter: hence it is non-chronological (Ansell-Pearson 1999: 33). And all of this need for **the palpation of force** — or rather, the palpation of difference and the palpation of time — lies here, there, and everywhere in and through tourism (as it does everywhere else, of course). And tourism conceivably plays (or can conceivably play) a significant role in helping all sorts of individuals 'become' in accordance with their own aspirations (i.e., their own vital, changing, dynamic aspirations). To restate the matter, like the realm of the arts, tourism provides so many potential opportunities for the experiencing of life as 'becoming', i.e., of *being in the making* (Garoian 2015:491) in the Deleuzian sense.

The Reflexity On Nomadic Logic:

Thinking Creatively / Thinking Spirally / Thinking Otherwise

As stated above, practitioners and researchers who might struggle with the often enigmatic and sometimes paradoxical character of Deleuzian conceptuality on the nomadic logic of possible opportunity and vibrant life might find solace in the work of Parr (2013). In this glossarial work, an attempt is made to explain the meaning of a litany of Deleuzian terms, which Deleuze (and / or Deleuze and Guatarri) used to advance his (and / or their) diagnostic accounts of the making of institutional, disciplinary, en groupe knowledge and the nature of 'recognized' or 'authorized' difference. To some extent, the Parr collation comprises something of a lexicon on *anti-philosophy*, for Deleuze-the-philosopher so regularly railed against the intellectual abstractions of philosophy, ipso facto, as a uniform or totalized 'disciplinary' knowledge, just as he did against the illusions of the unity of any received discipline, any heralded field, any sure science, or any received institutional thoughtdom (May 2008:12). Like Foucault, Deleuze was a thinker who argued for those opportunities and those understandings which are positive and multiple, **where difference should interpretively rank over concretized 'uniformity'**, where flows interpretively count more than hailed 'unities' and where mobile, temporary, flexible arrangements interpretively score over held 'definitive systems' (see Maiolo 2012; and Tonkonoff 2017, here).

Hopefully, an inspection of the 'concepts' (as defined in Parr) can help those who work in Tourism Studies learn *to think otherwise* — or learn to think even further and beyond into 'otherwise', that is beyond their own possibly-institutionalized and possibly-overcoded dogmatic interpretations of and about other peoples and places. See May (2008: 114-121) therefore, on the openness of the future and on thinking within and for a vital world.

Yet, we must not run away with the pixies here: we must not over-determine or overcode Deleuze as he (himself) remonstrates against the sheer prevalence of institutional, disciplinary, en groupe overcoding. "The [Deleuzian] aim is not to rediscover the eternal or the universal, but [for each of us contextually in our own travelled-to and local settings] to find the conditions under which something new is [or can be] produced" (refer, here, to Deleuze and Parnet 2007: vii, in particular). This is *can see*, *can think*, and hopefully *can do* Deleuzian creativeness: it is the call for ubiquitous reflective and reflexive 'palpation'.

So, under Deleuzian thoughtlines, we must not expect to ever be able to interpret the world comprehensively and exhaustively. Like Foucault, he believes that as soon as one has reached or made an interpretation (i.e., a decided explication on this or that), there danger lurks: see Hollinshead (1999/A), here, on Foucauldian governmentality and the diagnosis of 'things'. There is thus much inherent sense in the Deleuzian posthuman humility in and for all these conceptual understandings, even regarding the value in remaining open and fluid in one's interpretations not of distinct objects (i.e., the object singular), per se, but of 'the object multiple'. As May (2008: 172) puts it:

Deleuze's ontology [and his enabling vitalism] is not a resting place; it is not a zone of comfort; it is not an answer that allows us to abandon our seeking. It is the opposite. [The Deleuzian] ontology of difference is a challenge[:] … there is always more to know."

And it is thereby a form of **creative practical thought** (a form of affirmative consciousness) that requires one to dream actively and critically — that is, "to dream with one's eyes open" (Deleuze 1988: 20) and see and think openly, fluidly, dynamically vis-à-vis the productive event of becoming rather than the fixed and static thing — or in other words, the lively happenstance-occurrence rather than the rigid agreed-entity.

Prospect — Thinking With And Via Nomadic Logic:

Applied Deleuzian 'Generative Vitality' To Travel, Tourism, And Related Mobilities

This manuscript here in JT has covered the influential and provocative *alternative ways of thinking* of Deleuze in contrast to many of the received and traditional thoughtlines of institutions and disciplines. As an illustrative paper, it has sought to provide a brief conceptual primer for newcomers to Deleuzian philosophy. Hopefully, this manuscript has produced a clear-headed introduction to his metaphysical work and its political and ethical significances. Hopefully, this paper here in JT has reasonably situated his nomadic thinking vis-à-vis both the accelerating nobilities of our time and the liberating aesthetics of sensation that is conceivably being fertilised during the opening decades of the twenty-first century. And now, at the close of this manuscript on Deleuzian thought (and Deleuzoguattarian influence) it is useful to translate this compass of and about Deleuzian palpative scholarship to the particular arena of nomadic thought per travel, tourism, and related mobilities. And this will be carried out with reference to what I (an intentionally palpative author) deem to be six [6] cardinal points of deliberation for such conceptual nomadicisms:

• Reflection Point 1 For The Mobilities of Travel / Tourism:

The Need For More Critical Cartographics

Collectively, the insights given so far in this manuscript attest to the strong view of Deleuze that there is a distinct paucity of intellectual-academic reflection in most (almost all? / all?) fields of scholarship these days. His own thoughtlines seek to draw us beyond the centre of gravity of established disciplines and domains (and their oh-so-often over-concentrated / overcoded subject making — that is, beyond what Braidotti (2019: 136) (plainly a card-carrying member of the Deleuzian philosophical household) terms "the narrow and flat empiricism" and big data reductionism of social studies fields today.

As Deleuze recognised, progress in both 'social science' and 'science' fields advances through reductionism, but he maintains that that very dependency gives rise to weakness when it solidifies as the default framework for thinking there. To him, too many individuals and interest groups within dogmatic and established domains and discourses fixate themselves upon tried and tested angles and deny themselves *decent thought* about a or the larger order of things, regularly curtailing (i.e., reducing) involved phenomena to single-factor forms of analysis. Deleuze was adamant that those in specific fields should regularly question how the field (and they themselves within it) have identified populations and have classified the world about them, and accordingly whether the field (and themselves) have appropriately, fittingly, or tolerably attempted to reach out to the extended meaning of 'things' and have therefore thought roundly and connectively about the matter in hand (Mazzei 2013: 107). To Braidotti (2019:135) — in her Deleuzian take on the production of knowledge and the practice of the academic humanities — it is all too common for social science and humanities fields to deal in *murky objects* (of repeatable but limited vision) year after year — that is, all-too-frequently operating from **dualist inspection points** with their **facile binary classifications** and their **universalist assumptions**: see also Braidotti (2011:129 and 183/4) here. To Mazzei (2013:105), too much data gathering (even in the advanced qualitative inquiry realms of the social sciences) is 'unthought', hence her own salutation of Lather's (2007) clamour for 'getting lost' / 'becoming undone' *post-methodology work* these days. To Braidotti (2019:136), such Deleuzian condemnations of the stranglehold of transcendental empiricism (with its hackneyed universalisms) demands a more liberated understanding of what can reasonably constitute evidence-based thinking. And to her, this begets the resultant necessity for more *critical and creative cartography* work in social science / humanities fields where the studied figurations are painstakingly "located, situated, perspectival and hence immanent to specific conditions" (Braidotti 2019:136). In this palpative light, a critical cartography is a reasoned inquiry that "illuminates the complexity of on-going process of subject-formation [thereby enabling the generation of] subtler and more complex [scrutiny of the embedded / involved] power of discourses" (Braidotti, 2019:85).

> **• Reflective Question(s) On The Nomadic Logic of Travel / Tourism / Related Mobilities:**
> *How fixated (subject-wise) is, your own work? Would your own studies of regions, nations, the world benefit from palpative engagement with a more expansive and connective critical cartography? How clean and connected (or otherwise 'murky' and 'only superficially examined'?) are the destinations, the events, and the objects you currently work with or upon as you examine the particular pasts, presents, futures of 'tourised' places and spaces?*

• Reflection Point 2 For The Mobilities of Travel / Tourism:

The Obligation To Work Commonly With 'Virtuality'

In his cultivation of posthuman grounds of thinking Deleuze (with Guattari) conceived of a parallelism between philosophy, the arts, and science where each of them have much to offer in illustrating the virtual possibilities of flourishing life (Braidotti 2019:143). But can studies of travel and tourism join such a parallel structure, and free understandings in the field from an undue dependency upon fixed identitics and upon fixed classifications of the world *where subjects and objects only have value or meaning in the realm of [representational] appearance:* see Baggini (2018:197), here? Can studies of travel and tourism play a leading role in not just representing the world descriptively, but in helping travelers (and host communities) creatively develop conceptual understandings about place and space (Coleman and Ringrose 2013:7)? In these respects, see the deployment of Deleuzian 'ontologies of becoming' in these respects by Massumi (2002) in his informed *Parables for the Virtual* publication. Perhaps those who work in tourism / Tourism Studies in China will inherently have a large advantage in these matters of virtuality and its communication; however:

> The very word for 'things' in Chinese (*wu*) does not mean 'entities in isolation'… . 'Wu' are better seen as 'phenomena, events and even histories' which are *always becoming*.
>
> (Bagini 2018:237, emphasis added [in italics])

Those studying travel, tourism, and related mobilities who may want to harness Deleuzian nomadic thoughtlines must learn how to think not so much in terms of taken-for-granted categories but rather in terms of the experiences which travelers (and locals) may have rhizomatically with (after Braidotti 2011:96) "unfamiliar forces, drives, yearnings, or sensations [and thereby via] a sort of spiritual and sensorial stretching of the boundaries of what [it is possible to see or be]". Can those who work on such nomadic subjects therefore readily and easily place a stronger accent upon the felt *immanence* of rare ideas and / or unexpected experiences and upon the transformative force of 'the constant flows' that the travel or tourist 'event' (or the hosting opportunity) can give? Is it just too much of a ready and easy matter for those who work in tourism / Tourism Studies to deal in understandings predicated upon the view that "the other can never be fully known" (Caton 2018:199, in questioning 'projects of knowing' in tourism from an explicit Levinassian stance — after Levinas 1996 — as well as from an implicit Deleuzian one)? Are there many practitioners out-there in tourism operations who are skilled at communicating objects as being 'more than one' (after Manning 2013), and hence not projecting multiple objects, per se, but projecting *the object multiple* (after Mol 2003) and thereby *the objects multiple*? Where attention is drawn to 'the object multiple', communicators are engaging in the kinds of Deleuzian illumination of the inherent multiplicity of 'things' which those who work in philosophy, or in the arts (viz., Manning and 'dance' metaphorically), or in the sciences (viz., Mol and 'the medical sciences', literally) often work to, these days. And ... are there many managers or developers in tourism out-there who are experienced at communicating neo-vitalist Deleuzian possibilities for living which pointedly embrace the virtual and which, for instance, inform travelers (and reinforce host understandings) about biocentered resonances and/or cosmic rhythms "somewhere between the no longer and the not yet" (refer here to Braidotti 2011:203, for instance, on post-secular paradoxes vis-à-vis the spiritual and secular transpositions)?

• **Reflective Question(s) On The Nomadic Logic of Travel / Tourism / Related Mobilities**

Where in tourism programming and packaging are the leading sites of place or space where the intelligence conveyed does not depend upon a or any accuracy of representation (i.e., upon ***the correspondence theories of truth*** *which bolster communicated statements via 'observable factual realities': see Braidotti 2013, here on 'Posthuman Life Beyond Theory')? Are there any (many?) operations already in existence in tourism across the continents which are competent at revealing how the hailed virtualities of populations translate (or have translated) into concrete actualities?*

• Reflection Point 3 For The Mobilities of Travel / Tourism:

The Invocation To Think Spirally And Otherwise

Many of the glossarial terms defined in Parr (and in other collations on Deleuzian terminology) address the Deleuzoguattarian caution that it is conceptually unhealthy to only ever deploy angles of rationality and intentionality to understand Deleuzian matters of (for example) ‘nomadicism’, ‘affect’, ‘becoming’, whatever; refer here, for instance, to Mazzei (2013: 101 on the reasoning of Deleuze concerning the encompassing power of ‘desire’’). In order to interrupt or rupture **dogmatic (institutionalised) images of thought**, it is so often critically necessary — as many of the glossarial terms in Parr infer — for the researcher or practitioner in the given social science cum soft science field to self-helpfully *become undone* when inspecting Deleuzian ‘events’, ‘encounters’, ‘experiences’ (Mazzei 2013:96), for — to repeat a statement from earlier in this paper — “thinking is not something ‘we’ do, thinking happens to us, from without” (Colebrook 2002:38). The Deleuzian call for reflective and reflexive palpation is therefore for the researcher or practitioner to take time and space to think about the examined contexts in nonlinear or spiral ways, something that (for instance) Mignolo and Walsh (2018:10) demand when researchers who are normally caught up in ‘the prison house of coloniality’ have to learn whenever they have to uncover and interpret neo-colonial, decolonial, after-colonial impulses in untried or distant locales. For them (Mignolo and Walsh), the required imaginary for many observers in ‘the conceptual West’ (or from ‘the conceptual North’) is inherently Deleuzian and demands forms of engagement where one has “to learn to unlearn in order [to cothink with the decolonising population or to perhaps] relearn [local or lost narratives]” (Mignolo and Walsh 2018:254).

• Reflective Question(s) On The Nomadic Logic of Travel / Tourism / Related Mobilities

Tourism is very much about the projection of difference and the quest for ‘the other’ (Urry 1990). But are there many researchers on travel / tourism who are proficient at becoming undone when they have to map or monitor ‘other ways of knowing’ without sailing into those other settings with an already totalised vision of the neoliberal system with its imperatives of advanced capitalism and entrenched globalisation? Perhaps many outreach researchers on travel, tourism, and related mobilities would gain from a reading of Stewart’s Deleuze-inspired work ***Ordinary Affects*** *and learn how to unlearn the destination and hosting settings as* ***a live surface*** *in order to grasp what are the “intensive, immanent, palpable, moving” potentials there (Stewart 2007:3-4)? Such palpated trajectories of inspection might indeed enable more researchers (and woke practitioners) to not only generally understand the world as* ***a generative flux*** *that* **produces** *realities (Law 2004:6), but specifically get to grasp the role of tourism (itself) as the* **productive** *(reality-making) generative flux. Such would be — such is — the intrinsic Deleuzian call for nomadic analysis translated to studies of travel and tourism when and where the researcher must learn to unlearn by ‘thoroughly interrogating’ the connections which* *he/she can make there and the shifting relationship he/she will no doubt have to engage in: see Cole (2013:226-227), here. Such are the demands of* ***thinking otherwise*** *if the multiplicities of travel and tourism are to be accommodatingly gauged (May 2008:120).*

• Reflection Point 4 For The Mobilities of Travel / Tourism:

The Plea To Monitor The Geography Of Reason

It is the judgement of Deleuze that Western conceptualities are predominantly based on traditions of objectivity that rise over (i.e., seek to govern) all places and all times. The philosopher Flanagan (2010) — in striking a Deleuzian note — maintains that Western metaphysics is *transcendentally pretentious* in its assumptive goal of identifying what is really right or good, independent of culture and history. As Deleuze and Guattari often suggest, the almost totalitarian ontological profile of Western conceptuality can be exceedingly violent for other populations (and *internally* for Westerners themselves!) in many veins, viz., those of culture, spiritually, civilisation, cosmology, epistemics, et cetera. In colonial and neo-colonial settings, these forms of governing Western objectivity can indeed be 'belligerent' (Braidotti 2011:2006, taking a Deleuzian line in her own call for corrective neovitalist feminist thought to overcome such eurocentric transcendental presumptions) which Gilroy (2010; cited in Braidotti 2013:28) maintains involves 'the bellicose dismissiveness' of other cultures, other civilisations, and other 'generated lived possibilities'.

• Reflective Question(s) On The Nomadic Logic of Travel / Tourism / Related Mobilities

Thus, is the study of travel and tourism around the world regulated (still regulated?) by a single and crippling North Atlantic or eurocentric model of universalised objectivity, or as Telfer (2009:150) has phrased it for the field, has much progress indeed been made in "the repudiation of Westernization in favour of an endogenous model of change"? Has the recent turn of the century seen any substantive advances 'beyond the impasse' in the decent and faithful search for a new (non-Western) non-exploitative paradigm of development that (for instance) pays meaningful respect to Indigenous knowledge (Telfer 2009:153)? Is effective progress being made to undo the destabilising ontologies of tourism (across the continents) that have for countries 'interiorised difference as otherness' and which have been operational on the back of essentialising European prescriptions (Wearing, McDonald, and Ponting 2005; Grimwood, Caton, and Cooke 2018; refer also to Hollinshead [on Horne] 1999/B, here)? Is global tourism still built upon the sorts of abstract and universal North

Atlantic fictions which underpin the colonial narratives of tourism? Please see Richter (1995), here, on the over-influential role of the Western media in the fictional temporalities of global travel projection, and Huggan (2001) on the power differentials involved in the recognition and projection of (for example) India / Indians in and through tourism?

• Reflection Point 5 For The Mobilities of Travel / Tourism:

The Summons — Under The Denormalisation of Things — To Genunely Recognise The Hybrid And The Interversal

Much of what Deleuze and Guattari write about concerns the possibility of (and the necessity of) denormalizing taken-for-granted-institutional-or-interest-group-views-of-the-world. Once the force of the rational and intentional (and the too-often-unquestioned!) making of ‘the subject’ is recognized, it is then possible — under Deleuzoguuattarian thought concerning the palpative effort to denormalize ‘things’, ‘objects’, and ‘ideas’ — to conceive of a multiplicity of new or emergent collective arrangements of things (i.e., of people, of concepts, of other things / et cetera) against ‘power’ (Mazzei 2013; Jackson and Mazzei 2018). For Braidotti (2019:148) such acts of denormalization and denaturalization are particularly required where neo-liberal momentum has captured or appropriated the academic humanities, and she draws upon the work of Noys (2014) who has plotted the malignant and insufficiently questioned velocities of advanced capitalism. For Walsh and Mignolo (in Mignolo and Walsh 2018:1-2), the required effort in understanding the integral relationships of humans (and other living organisms) to land, to territory, to the cosmos — within scholarship circles — is to *unsettle* (i.e., to denormalize or to denaturalize) “the singular authoritativeness of academic thought” about distinct people and over-stabilized North Atlantic abstract universal fictions, and instead recognize the world’s *pluriversality* and thereby illuminate the under-recognized *interversal paths and* the under-appreciated *interversal relationships* between humans and non-humans organisms. Such is the Deleuzian summons **to think away from flat fixities of meaning** (Mazzei 2013). Stated another way, this Deleuzian call to denormalise is an appeal to open up “to emergent, inter-active heterogeneities, to the emergent spaces in between” (Wyatt, Gale, Gannon, and Davies 2011).

• Reflective Question(s) On The Nomadic Logic of Travel / Tourism / Related Mobilities

In disciplinary terms, Deleuze and Guattari (1987) label such overcoded and supposedly self-evident or ‘undeniably true’ normalizations (i.e., the targets for denormalization) within fields and domains as ***the micro-fascisms of our age*** *or the* ***micro-fascisms of our institutions****. In studies* *of travel and tourism, such acts of illumination and correction (or rather, of identificatory cleansing) — where eurocentric influences have been notably pungent in that micro-fascist representation of places and micro-fascist essentialization of peoples — might constitute what Walsh and Mignolo (in Mignolo and Walsh 2018:2) would call either 'pluriversal decoloniality' or otherwise 'decolonial pluriversality'. In this regard, Braidotti (2013) reminds us that such multiple worlds are not things or ideas of the future, for they are already here and around us. Ergo, in studies of travel and tourism, which are the representations of place and space that address such demanded matters of pluriversal decoloniality: where are the interpretations of site or territory sincerely and decently pluriversal?*

Reflection Point 6 For The Mobilities of Travel / Tourism:

The Cue For Relationality --- Posthuman Connectivity

The work of Deleuze and Guattari calls for the need for (and benefits of!) humans relating to not just the broad human world of people, societies, and nations, but to the wider non-human world. Their writings foreground the need of humans to enter into communication with and engender understandings that generally reach across geopolitical territories and colonial divisions, and which particularly contend with the universalizing claims and the epistemic vehemence of Western cum North Atlantic forms of modernity. In practical terms, the thoughtlines of Deleuze and Guattari augur the critical necessity and creative enhancements to life that can be fertilized when humans acknowledge not just the contextuality of the events and encounters they come across or become engaged in, but the multiplicity of the difficult cultural, spiritual, cosmological worlds they live within, and thereby the gains of being sincerely and responsibly *relational* within them. For Walsh (in Mignolo and Walsh 2018:254) — writing on the praxis of decoloniality inherently in parallel to Deleuzoguttarian notions of relationality — such conceptions about 'decoloniality' must not remain merely platitudinous: they must not be "a new abstract universal, but a [committed and attainable] way of being, thinking, serving and doing, a [whole] conscious way of existence". The shift of eurocentric institutions and interest groups towards relationality must thus be an acknowledged and decided movement "away from Western ontological totalitarianism" (Mignolo and Walsh 2018:239) to faithfully recognize, address, and buttress new (i.e., previously suppressed or silenced) 'horizons of knowledge' — although, importantly, Deleuze would no doubt prefer that to be stated as *horizons of thinking.*

• Reflective Question(s) On The Nomadic Logic of Travel / Tourism / Related Mobilities

For Grimwood, Caton, and Cooke (2018), those who work in Tourism Studies — especially on an international front — have a tall moral duty to think and work by relational values. For (Bertella 2018), the cultivation of ***the relational gaze*** *in and across tourism is a pressing matter for the field: for instance, to her, if tourism projects, packages, and programmes are to introduce travelers cum visitors to populations like Yolngu in Arnhem Land in the Northern Territory of Australia, i.e.,* ***to peoples who have traditionally already lived to relational ways of living,*** *then it would be ironic and debilitating if those eternal project managers, package developers, and programme researchers do not listen to and communicate about such populations 'relationally' themselves. Where tourism practitioners and researchers are engaged* ***in worldmaking activity*** *(i.e., everywhere and all of the time,* ***unavoidably*** *(Hollinshead and Suleman 2017)), it should beneficially be realized that it will never be just one single world that is being inscribed or projected. Those who* ***worldmake*** *through tourism (i.e., each practitioner and each researcher in every facet of their work (Hollinshead and Caton 2017: Hollinshead and Suleman 2018) can advance understanding by thinking relationally along pluriversal lines (see Mignolo and Walsh 2018:147) and acknowledge that the experienced world is actually constituted of a multiverse of ways of living, being, and becoming: see Maturana in Maturana and Varela (1991), here, on* ***the multiverse.***

Overview — The Call For Self-Reflexive Questioning:

Towards 'Generative Vitality' Through Tourism / Tourism Studies

Let us finish with some overall ruminative Deleuzian queries for researchers and practitioners in Tourism Studies on the conceptual craft of reflective and reflexive 'palpation'.

Do you (the researcher or practitioner) over-trust the foundational narratives and the peddled perspectives that the chain of distribution within and across the tourism industry or the channel of projection within and across Tourism Studies gives you? How institutionalized are you in your juridical place and space making? How open are your interpretations of matters of difference? How static is your own held or hailed knowledge about tourism and the peoples, the places, the pasts, and the presents which it judges? How open, fluid, and vital are your own projections of place and space, generatively? Would it help your servicing of the cultures, the spiritualities, and the longstanding-traditions and the emergent-hybrid-transitions which 'live' there if you can learn more frequently, more regularly, and even axiomatically *to think otherwise* about the receiving populations and the resident cosmologies which you authorize and transmit? To what degree do you rely commonly, routinely, systematically upon heavily-institutionalized and overcoded **in-**terpretations of local being at the expense of more open **out-**terpretations of becoming?

In Deleuzian terms, how **striated** is the institutional imagination you are forced to work with (see Colebrook 2006 and Bonta and Protevi 2012 on the rigidities of 'striated' organizations versus relatively-open and **smooth** organizations); or otherwise, how accommodating are the historical accounts, the cultural narratives, and the interpretations of nature, the cognitions of spirituality that you embrace in quotidian fashion? Thus ... how effective is your own generative vitality? Are you *generatively vital* and notably refreshing in the worldmaking projections you deal in through your authorial role in Tourism Studies? How 'smooth' are the governing conceptualities of the bodies and organizations you work for and under; how spiral are the visions and the groupthink thoughtlines you have wittingly and unwittingly adopted yourself?

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Other Tourists as Part of Tourism Product

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Abstract

In the tourism services context, tourists receive services simultaneously with other tourists who consume services and share the same service environment with them. Therefore, other tourists in the service environment may have a positive and negative impact on the tourist's service experience due to some of their appropriate or inappropriate behaviours. This may also affect the tourist's subsequent purchasing behaviour. Hence, understanding the nature of tourist-tourist interactions (T2T) is important for the tourism industry. However, there are very limited studies on this issue in the literature. Therefore, this study was performed to explore incidents that cause satisfaction and disturbance of tourists during interactions, how these interactions occur, what levels, and in which places. Therefore, semi-structured interviews were conducted with 33 foreign tourists visiting Istanbul. In order to ensure the reliability and validity of the research, the data triangulation technique was used, and a focus group interview was employed with seven tourist guides. The findings revealed that the T2T interactions occurred directly and indirectly. Direct interactions consisted of spontaneous, superficial, and close interactions. Interactions occurred in service and public areas. Friendly, considerate, hostile, inconsiderate and rude, illegal and prohibited, offensive, and disgusting behaviours of other tourists caused the tourists' satisfaction and disturbance.

Keywords

other customers, customer to customer (c2c) interaction, other tourists, tourist to tourist (t2t) interaction

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Introduction

In the service marketing literature, the interaction between customers, who are not acquainted with each other, is called customer-customer interaction (CCI) (Huang & Hsu, 2010: 79). Most service encounters occur in the presence of other customers (Parker & Ward, 2000: 342). Especially, in tourism and hospitality services, other customers are inseparable parts of the consumption experience (Huang & Hsu, 2010: 79; Miao et al., 2011: 933). In the tourism service context, customers receive services simultaneously with other customers consuming services and share the same service environment with them (Miao et al., 2011: 933; Wu, 2007: 1519; Wu, 2008: 1504; Ye & Hui, 2011: 54).

Cross-cultural contacts in tourism generally involve interactions between tourists from different cultures and nationalities (Albu, 2015: 11). T2T interactions constitute an important social dimension of the tourist experience (Yagi, 2001: 22). Especially, C2C interactions require the integration of customers from different cultural backgrounds (Johnson & Grier, 2013: 306). In this context, interactions between tourists can be considered basically as interactions between customers, which has become a common phenomenon in many service areas (Huang & Hsu, 2009: 548). Therefore, managing CCI is very important in the tourism and hospitality industry (Nicholls, 2011: 210). However, there are a very limited number of studies in the literature on interactions between tourists (Huang & Hsu, 2010: 79; Yagi, 2001: 22). Researchers have not paid much attention to the relations between tourists and how tourists see other tourists (Yagi, 2003:1). Generally, there are not many empirical studies examining the positive and negative effects of interactions between tourists on service encounters (Chang, 2017: 2).

Because of all these reasons, understanding T2T interactions that can be seen as interactions between customers becomes a priority in the tourism sector. However, as previously stated, studies on the interactions between tourists in the literature are very limited. Therefore, this study aims to fill the lack in the literature about the interactions between tourists by understanding how and in which areas the interactions occur, what the interaction levels are, and the situations that caused the tourists' satisfaction and disturbance.

Literature Review

Customer to Customer Interactions

The service encounter is defined by Shostack (1985: 243) as "a period of time during which a consumer directly interacts with a service". Bitner (1990: 70) stated that a service encounter encompasses all aspects so that the customer can interact with the company, including physical facilities, personnel, and other tangible elements. One of these elements also is the other customers in the service environment (Grove & Fisk, 1997: 64).

Both the service system model and the 7P of the marketing mix have identified other customers as part of the service process (Huang & Hsu, 2010: 79). The "Service System Model" proposed by Eiglier and Langeard (1977) presents service organization to customers as visible and invisible parts. Visible parts impact the customer's perception of service experience and include communication personnel, the physical environment, and Customer B, who refers to other customers (Amorim & Marques, 2012: 3; Fakharyan et al., 2014: 612; Nicholls 2011: 211). CCI refers to interactions between customers, who are during service encounters or just around the service. The notion of CCI is based on interactions between Customer A and Customer B. In C2C interactions, there are Customer A's perception and Customer B's behaviour. In such interaction, Customer A perceives Customer B's behaviour from his / her own perspective. Customer B's behaviour can be verbal, non-verbal, intentional, or unintentional. Customer B may even not be aware of his / her own behaviour and its effects (Nicholls, 2008: 98).

Booms and Bitner (1981) added three new elements to the traditional marketing mix and proposed an extended marketing mix, including physical evidence (e.g., the physical environment and all tangible clues), participants (e.g., all human actors in service encounters including service personnel and other customers), and processes (e.g., procedures, mechanisms, and flow of activities) (Bitner, 1990: 70). In the expanded marketing mix (7P), all human factors involved in service delivery (both service personnel and customers) are named as participants (Bojanic, 2008: 80; Goi, 2009: 10; Grove & Fisk, 1992: 96; Grove & Fisk, 1997: 64; Rafiq & Ahmed, 1995: 6).

In the service marketing literature, "the interactions between customers, who are unacquainted with each other and are in the service facility simultaneously with, are called C2C interactions" (Brocato et al., 2012: 385; Huang & Hsu, 2010: 79). Service encounters often occur in the presence of many customers who consume services simultaneously and share the same service area (Andersson & Mossberg, 2004: 173; Grove & Fisk, 1997: 63, Ye & Hui, 2011: 54). Many customers receive services simultaneously with other customers, and so direct and indirect interactions between customers occur (Ye & Hui, 2011: 54). Consequently, other customers are those who are present in the service environment, and they may influence the nature of service outcome or process (Wu, 2007: 1519-1520).

In general, C2C interactions occur during and after the service encounter (Lee, 2016: 14). Many authors have noted that C2C interactions can occur inside and outside of service settings (Johnson & Grier, 2013: 306; Jue, 2008: 65-66; Lee, 2016: 14; Nicholls, 2008: 98; Nicholls, 2010: 88). While C2C interactions occurred within the service setting are called on-site or on-stage C2C interactions, C2C interactions occurred by word of mouth are called off-site or off-stage C2C interactions (Jue, 2008: 65-66; Lee, 2016: 14; Nicholls, 2008: 98; Nicholls, 2010: 88).

In general, customer experiences can be framed as a function of social interactions (e.g., employees and other customers) and physical environment (Cetin & Dincer, 2014:184-185). C2C interactions occur directly through specific interpersonal encounters, and also indirectly as customers are part of the same environment (Johnson & Grier, 2013: 306). Consequently, customers can influence each other directly and indirectly (Choo & Petrick, 2014: 373; Huang, 2008: 522; Jung & Yoo, 2017: 123; Libai et al., 2010: 268; Martin & Pranter, 1989: 6; Verhoef, 2009: 34; Wu, 2007: 1519-1520, Wu, 2008: 1504). Therefore, in many service environments, other customers can often affect a customer's service experience positively and negatively (Grove & Fisk, 1997: 63; Fakharyan et al., 2014: 611). Customers in the service environment may find themselves compatible with some customers, but also may find incompatible with others. Customers may be affected by certain behaviours, appearances and attitudes, first impressions, physical proximity, and verbal speech of other customers directly or indirectly (Martin & Pranter, 1989: 6). For example, other customers can destroy the customer's service experience through their behaviour, such as cutting into the line, talking loudly, smoking (Johnson & Grier, 2013: 306). The noisy children running and screaming around a restaurant can lead to discomfort for many customers (Lin & Liang, 2011: 354). However, in some cases, positive encounters with other customers can contribute positively to the customer's service experience and increase the customer's service quality perception (Martin & Pranter, 1989: 13). Therefore, CCI is an important aspect of service experience, and also managing CCI is often considered an important aspect of managing a service (Baron et al., 2007: 212; Fakharyan et al., 2014: 611).

Some studies have been carried out on customer-customer interactions (Bitner et al., 1994; Grove &Fisk, 1997; Martin, 1996). For example, Martin (1996: 146-159) investigated the effect of 32 behaviours exhibited by other consumers in public business environments on consumer satisfaction. As a result of the research, it was found that customers were satisfied with the gregarious behaviours of other customers (e.g., shaking the hand, asking about the well-being of the family, beginning a conversation even though never met, etc.), while they were unsatisfied with the violent behaviours (e.g., hitting the table in anger, kicking a chair deliberately, etc.) and the grungy behaviours (e.g., not wearing a shirt or shoes, propping their feet on a table, wearing dirty clothes, smelling like not having a shower for several days, etc.). Likewise, Bitner et al. (1994: 98-100) found that problematic behaviours exhibited by other clients (e.g., drunkenness, noncompliance with company rules and regulations, verbal and physical harassment, etc.) constitute 22% of the incidents that customers were dissatisfied with. Grove and Fisk (1997: 78) found that other customers' helpful behaviours (e.g., returning lost wallets and items, helping people with strollers and wheelchairs, taking pictures, and calling lost children, etc.) lead to customer satisfaction. Additionally, other customers can increase the customer's service experience positively by providing information and social support or undertaking a consulting role with their advice (Johnson & Grier, 2013: 306; Verhoef et al., 2009: 35). For example, customers sometimes wait for service in a retail store. During this time, they share the same area with other customers and are in physical proximity with them. In such an environment, other customers can add value to customers' service experiences by providing honest opinions, sharing product knowledge, and providing assurance on purchasing decisions that employees cannot provide (Kim & Choi, 2016: 384-386).

Tourist to Tourist Interaction

There is a limited number of studies in the literature on interactions between tourists (Huang & Hsu, 2010: 79; Yagi, 2001: 22). Generally, researchers have ignored interactions between tourists and how tourists see other tourists. (Yagi, 2003:1). Therefore, there are not numerous empirical studies that examine the positive and negative effects of interactions between tourists on service encounters (Chang, 2017: 2).

In general, social contact in tourism occurs between tourist-residents, tourists-other tourists, tourists-service providers, tourists- foreign workers, and tourists-investors (Reisinger & Turner, 2003: 37; Reisinger, 2009: 205). The tourist experience includes the interaction between tourists (Huang & Hsu, 2010: 79). Tourism allows contact between travellers (Cordeiro, 2014: 105). Tourist encounters involve relationships between foreigners from different cultures, and this allows people to have intercultural contacts (Burns, 1999: 94; Jack & Phipps, 2005: 6). Hence, interpersonal encounters in international tourism can also be seen as intercultural encounters (Yagi, 2003: 1). Cross-cultural contacts in tourism generally involve interactions between tourists from different cultures and nationalities (Albu, 2015: 11). Therefore, T2T interactions constitute another stage of the social dimension in tourism (Yagi, 2001: 22).

Tourism generally takes place accompanied by other tourists either with travel companions travelling with travellers (for example, friends and families travelling together) or other travellers met et route (Jue, 2008: 44). Many authors indicated that customer or tourist interactions generally occur in two different ways as intragroup and intergroup (Huang & Hsu, 2009: 79; Jue, 2008: 66-67). Jue (2008: 66-67) indicated that intragroup interactions represent interactions with family members and friends who jointly participated in the service process, while intergroup interactions express interactions between customers who meet each other accidentally in the servicescape. Likewise, Huang and Hsu (2010: 79) stated that interactions between tourists can be divided into two categories as intragroup and intergroup interactions. The first is the interaction between travelling companions (e.g., friends and families who travel together), while the latter refers to the interactions between unacquainted tourists who met each other on the route.

In the service marketing literature, the interaction between unacquainted customers is called C2C interaction (Huang & Hsu, 2010: 79). Other customers are inseparable parts of the customer's consumption experience (Huang & Hsu, 2010: 79; Miao et al., 2011: 933). The consumption of services in the tourism sector typically involves sharing the same service environment with other consumers. Numerous consumption experiences in the tourism and hospitality sector, such as a cruise trip or dinner in a restaurant, involve the presence of other consumers in the service setting (Miao et al., 2011: 933). Moreover, C2C interactions require the integration of customers from different cultural backgrounds (Johnson & Grier, 2013: 306). Customer satisfaction or dissatisfaction are often affected by the characteristics and behaviours of other customers who are part of the tourism service experience, and thus other customers are part of the service itself (Wu, 2007: 1519). In this context, the interactions between tourists can be seen as interactions between the customers, which have become a common phenomenon in many servicescapes (Huang & Hsu, 2009: 548).

Cetin & Walls (2016:400) stated that other customers are important element in travel experience. Other customers may affect a customer's service experience positively or negatively (e.g., friendly or helpful behaviour, crying children, profanity, rudeness, etc.) (Brocato et al., 2012: 387; Grove & Fisk, 1997: 63). Especially, in the context of tourism, the presence or behaviours of other tourists may not be an obstacle to the goals of tourists, but the behaviours of other tourists ,such as making noise in a museum, and throwing rubbish in a national park can cause them an unpleasant feeling (Chang, 2017: 3). Therefore, managing C2C interactions in tourism services becomes very important (Nicholls, 2011: 210).

Tourists are not homogeneous, and each group has different backgrounds, preferences, patterns, and patterns of behaviour (Yagi, 2001: 22). Different attitudes and behaviour patterns will likely emerge between tourists in tourism in which cultural diversity is intense (Saatci & Avcikurt, 2016: 2542). Different behaviour and value systems of people from different cultures may cause conflicts between cultures. An appropriate behaviour or value system in a person's culture may not be considered appropriate in other cultures (Yagi, 2003: 4). For example, Kwortnik (2008: 289-307) conducted a study on cruise passengers and revealed that some characteristics of other customers (e.g., age, actions, and appearance) affect the cruisers' perceptions of the ship's atmosphere. In addition, cruisers have given negative reactions to other customers using cigarettes, making noise, causing crowding and wearing extremely casual clothes because they disrupt their holiday experience (e.g., escape and intellectuality, etc.).

As another example, some British tourists who came to Eastern Europe to organize a Stag Party created great tension for other tourists. There was a lot of news in the press about that issue, and it was stated that the tensions were seen as important enough by the British Foreign Office and that the British were given special recommendations for planning stag parties abroad. Likewise, it is not an unusual thing to see topless tourists on the coast of southern France; however, such an image is rarely seen in the Baltic region of Poland and may not be appropriate. Furthermore, the influx of Russian tourists who like heavy parties to holiday destinations in Europe caused negative reactions among some tourists (Nicholls, 2011: 214). German tourists inquire in their online reservations whether hotels accept Russian tourists, and they prefer hotels that do not accept Russians (Patronlardunyasi, 2007). In a study conducted on 8,100 German holidaymakers by Urlaubstours, which is the German travel operator, it was revealed that the Germans saw Russians and British as both noisy and very drunk tourists. After the Russians and the British, the Polish ranked third for the same reasons. In addition, it was revealed that the Germans were displeased with the Chinese because of their table manners and with the French because of their rough and hostile approach (Gadd, 2014).

Methodology

Purpose of the research

This study was conducted to explore situations that caused the tourist's satisfaction and disturbance during interactions with other tourists. The study also explores how these interactions occur, at what levels, and in which places.

Research Method

In this study, the qualitative research method was chosen. Qualitative research enables the interpretation of people's experiences (Vanderstoep & Johnston, 2009: 166). Moreover, the phenomenological method was chosen in order to determine the tourists' experiences with other tourists. Phenomenology aims to understand an experience from the perspective of the participants. Investigation of the underlying meaning of experience is at the core of the phenomenological study (Williams, 2007: 69).

Data collection tool

In this study, a semi-structured interview technique was used. A question form was prepared to be asked to tourists by using the available literature. The question form consists of two parts, namely questions about demographic information and interactions between tourists. In general, tourists were asked open-ended questions related to the following situations:

- Who do they usually travel with? (alone, with friends, family, etc.)
- What do they think about interaction with other tourists?
- How do they interact with other tourists?
- Which areas do they interact with other tourists?
- Which behaviours of other tourists constitute disturbance and satisfaction for themselves?

Based on the semi-structured interview technique, interviews lasting for an average of 45 minutes or more were conducted with 33 foreign tourists from different nationalities who came to Istanbul between January 2018 and March 2018.

Sampling Selection

In a qualitative study, the main purpose of using purposive sampling is to obtain cases that are considered rich for information purposes (Sandelowski, 2000: 338). In purposive sampling, researchers determine participants according to the most appropriate characteristics for the study, and participants are selected because of their previous experiences and knowledge about the subject being studied (Baskale, 2016: 26). Therefore, considering that it would be appropriate to benefit from the experiences and opinions of people who are currently tourists in Turkey, have been in at least two different countries except for Turkey and have interacted with other tourists both in Turkey and other countries, the purposive sampling method was preferred, and foreign tourists with these characteristics were selected.

Creswell (2014: 239) stated that the sample size included typically ranges from three to ten individuals in phenomenology. As well as the number of observations or interviews, the duration of the interview can be taken as an example in qualitative research (Baskale, 2016: 27). In this context, 33 foreign tourists visiting Istanbul were selected, and interviews were conducted with an average of at least 45 minutes each.

Data saturation is achieved when enough information is available to duplicate the study, when the ability to obtain additional new information has been attained, and when further coding is no longer feasible (Fusch & Ness, 2015: 1408). After 33 interviews, it was decided that the feedback collected from the participants was self-repetitive, and the data reached saturation. Interviews were recorded on the electronic media on the same day and transcribed verbatim. The data were subjected to content analysis, and the common themes were categorized. While collecting and analyzing the data, codes such as P1, P2, P3 were given to each participant. In general, the data analysis of the computer system coding and hand-coding is available (Creswell, 2014: 245). In the study, a manual coding system was used to analyze the data.

Validity and Reliability

Triangulation used in quantitative research to test reliability and validity can be used to test or maximize the validity and reliability of a qualitative study (Golafshani, 2003: 597). In this context, the triangulation technique was used to ensure the validity and reliability of this study. In the study, the opinions of academicians working in the field of tourism were consulted for the preparation of questions on interactions between tourists. In addition, a long time was spent in the field. It was consulted on expert opinions on the results. The results obtained from the participant interviews were shown to tourism academicians working in the field of tourism and the tourist guides working in the field of tourism application.

A focus group interview was conducted with a total of 7 tourist guides. Before the interview, a question form was prepared to ask the guides about T2T interactions. The meeting was carried out on the 8th of May 2018 at a cafe in Taksim. Concerning the number of people in the focus group interview, Creswell (2014: 239) stated that the interviews could be conducted between 6 and 8 people. Moreover, Cokluk et al. (2011: 101) stated that the ideal duration of an interview in the focus group was 1-2 hours. In this context, the interview lasted 90 minutes in total with 7 tourist guides. During the interview, the guides were asked similar questions with the tourists. In the data collection and analysis, similar operations and processes which applied to tourists were applied. In the results of the analysis, some themes obtained from tourists were approved, new sample cases related to interactions were obtained and placed under certain themes, and the analysis findings were reevaluated. The findings obtained from the study are explained in detail.

Findings of Tourist Participants

The nationalities and demographic information of the tourist participants are shown in Table 1 and Table 2.

Table 1
Demographic Information of Tourist Participants

Age	(f)	Education	(f)	Income	(f)
18-25	10	High school	2	No income	5
26-35	15	Graduate	22	1-500 €	4
36-45	5	Master	7	501-999 €	0
46-55	1	PhD	2	1,000-1,999 €	15
56-65	2			2,000-2,999 €	4
				3,000-3,999 €	4
				4,000 € and over	1
Religion	**(f)**	**Gender**	**(f)**	**Marital status**	**(f)**
Muslim	14	Female	19	Married	5
Christian	7	Male	14	Single	28
Jewish	1				
No religion	11				

As can be seen in Table 1 and Table 2, the majority of participants (25) were between 18-35 ages. In terms of education, 22 participants have graduate degrees. In terms of income, the majority of them (15) had an income of around 1,000-1,999 €, the majority of participants (14) were Muslim, 19 participants were female, and the majority of them (28) were single. The nationalities of the participants are shown in Table 2. Most of the tourists participating in the study come from countries such as Russia, Iran, Bosnia and Herzegovina, Indonesia, the Netherlands, Turkmenistan, and Pakistan.

Table 2
Nationalities of The Tourists Participants

Nationality	F	Nationality	F	Nationality	F
Russia	4	Argentina	1	Switzerland	1
Iranian	3	Australia	1	Kazakhstan	1
Bosnia and Herzegovina	2	Bahamas	1	Colombia	1
China	2	France	1	Egypt	1
Indonesia	2	India	1	Poland	1
Netherlands	2	England	1	Taiwan	1
Turkmenistan	2	Israel	1		
Pakistan	2	Spain	1		

As a result of the analyzes, it was found that the interactions between the tourists occurred indirectly because they are part of the same physical environment, and directly through interpersonal encounters.

In the study, direct interactions occurred as a result of direct face-to-face encounters of tourists with each other through interpersonal encounters and verbal and non-verbal actions that happen between them during these encounters.

It was found that spontaneous and superficial interactions occurred through both verbal and nonverbal interactions, while close interactions occurred through only verbal interactions that were realized by activities such as tourists being friends with each other and participating in common activities.

It has been revealed that spontaneous interactions generally occurred through mutual exchange of information of tourists [e.g., personal talkings arising from curiosity, and getting or giving advice (e.g., places to visit in the city, meals to eat, restaurants to eat food, addresses that cannot be found, etc.)], and through verbal-non-verbal-physical abuse. Superficial interactions occurred through instant situations such as pushing or bumping each other, making small requests and demands from each other (e.g., asking for a chair or charger, taking photos and videos, sitting on a bank, etc.) and greeting each other (e.g., verbal and non-verbal greeting like hello, good morning, smiling and hand waving, etc.).

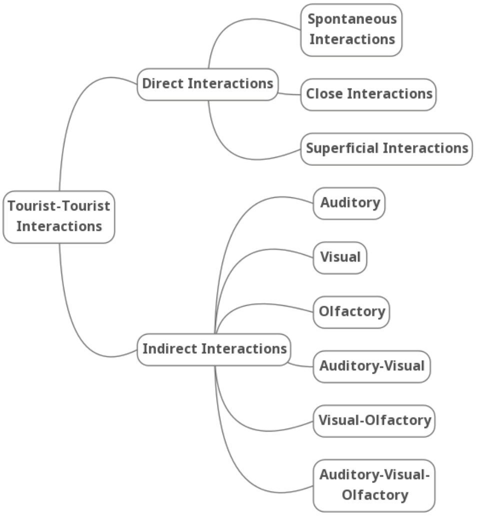

Figure 1. Tourist-Tourist Interactions and Levels

The difference between the close interactions and the spontaneous interactions is that the conversation is not daily and that the tourist develops a friendship with other tourists and participates in joint activities. Close interactions consist of long-term interactions between tourists. There is also a friendship link developed among people. The biggest difference that separates superficial interactions from spontaneous and close interactions is the duration of the interaction. In superficial interactions, interaction takes place in a very short period of time.

Table 3

Participants' Statements in The Direct Interactions

Spontaneous Interaction
P18: "I ask them because I don't know the city. I get information from others about nice places for eating and addresses which I can't find… They give me information about these issues."
Close Interaction
P10: "When I was in India I met with two people from England. They were students, and they invited me to visit beautiful places. We visited everywhere together. We made a good friendship."
Superficial Interaction
P6: "Generally, I met friendly, gentlemen and polite people. We didn't know each other, but we were greeting each other every time. Other tourists said "hello", "good morning", "good night to me every day ."

In the study, it was found that indirect interactions occurred because tourists are in the same physical environment with other tourists (in other words, tourists share the same physical environment or setting with other tourists). Indirect interactions refer to actions that are not directed at tourists by other tourists, who are part of the physical environment. There is no mutual interaction of a tourist with other tourists in the indirect interactions. Indirect interactions mean that tourists, who share the same physical environment (settings) with other tourists, observe the appearances and behaviours of other tourists and that they are unilaterally and indirectly affected by these behaviours and appearances. According to this, a tourist may be affected as auditory (making noise, etc.), visual (not dressing suitable for culture and environment, etc.), olfactory (smelling bad, etc.), both auditory and visual (fighting, etc.), both visual and olfactory (smoking indoors, etc.), and auditory-visual-olfactory (getting drunk, etc.) by other tourists' behaviours.

Tourist-Tourist Interaction Areas

According to the results of the analysis, it was concluded that T2T interactions occurred in service areas (e.g., hotels, hostels, restaurants, cafes, bars, airplanes, boat tours, etc.) and in public places (e.g., worships, airports, bazaars, shopping centers, streets, parks, museums, touristic places, etc.)

P31: "It is starting from the hotel, lobby, restaurant, any cafe, in the street or the museum. You might just start chatting with someone and become nice friendships anywhere". Likewise P6: "For example, it may be in a restaurant and in the praying places, attraction places. Like this… It may be during boarding time in the airport or on the plane."

Satisfying and Disturbing Incidents in The Direct Interactions

Satisfying and disturbing incidents in the direct interactions refer to other tourists' direct verbal and non-verbal behaviour towards a tourist during interpersonal encounters between tourists and the tourist's satisfaction or disturbance from these behaviours. These incidents originated from the considerate, friendly, inconsiderate and rude, and hostile behaviour of other tourists.

Table 4
Satisfying and Disturbing Behaviours of Other Tourists in The Direct Interactions

Behaviours	Meaning	Examples
Considerate behaviours	The behaviours that are without neglecting the rights and feelings of the tourist, considering and respecting the tourist. Namely, other tourists' behaviours arising from their own thoughts and kindness.	such as being polite (e.g., offering treats and using polite forms of address such as thank you, sorry, excuse me), being respectful (e.g., respecting personality, ideas, beliefs, and personal space of the tourist, etc.), and being helpful (e.g., recommendations about food, restaurant, address, visiting places and other personal helpings, etc.).
Friendly behaviours	The behaviours that tend to meet tourists, establish friendship and improve relationships.	such as being fun, being interested, being without prejudice against tourists, starting a conversation with tourists, and contacting easily with tourists.
Inconsiderate and rude behaviour	In contrast to considerate behaviours, conscious and unconscious behaviours are made by neglecting the rights and emotions of the tourist.	such as being uninterested, being late for appointments, making racial and ethnic jokes, cursing, abusing, pushing and bumping, constantly requesting to take photos and videos.
Hostile behaviours	Unlike friendly behaviours, the behaviours that are made with hostility	such as being prejudiced and discriminating towards tourist

Table 5
Participants' Statements on Satisfying and Disturbing Behaviours of Other Tourists in The Direct Interactions

Considerate behaviours	P15: "When I was in Barcelona, we met a French couple. We were staying in the same hostel together. We over-talked about where we would want to go. The lady said, "Oh, we can help you guys because we are new here as well, and maybe you want to come with us. She was very helpful."
Inconsiderate and rude behaviours	P18: "Sometimes, their looking at me is like touching me. It is because when I was in Morocco, three men from Portugal looked at me and then wanted to touch me. It disturbed me so much."
Friendly behaviours	P8: "Spanish people, I think that they are very nice. They like to have fun. Most of the time they are not aggressive, they are very welcoming. On the other hand, Turkish and American people are the best for me. In general, if you want to meet with them or ask to go anywhere tomorrow, they say okay. They behave by the book."
Hostile behaviours	P3: "Other cultures and other nations don't want to connect with Iranians. We have a bad image in their eyes. They say Iranians are terrorists because we are Muslims. Sometimes I meet these kinds of tourists. They didn't want to talk with me after learning my nationality. It was sad."

Satisfying and Disturbing Incidents in The Indirect Interactions

Satisfying and disturbing incidents in indirect interactions refer to tourists who share the same physical environment with other tourists, observe the appearances of other tourists and their behaviour in the environment (settings), and they are unilaterally and indirectly affected by these behaviours and appearances. These incidents in the indirect interactions originated from the considerate, inconsiderate and rude, illegal and prohibited, offensive and disgusting behaviours of other tourists.

Table 6

Satisfying and Disturbing Behaviours of Other Tourists in The Indirect Interactions

Behaviours	Meaning	Examples
Considerate behaviours	Other tourists behaviours arising from their own thoughts and courtesy, without neglecting the rights and feelings of the tourist, and that considering and respecting the tourist.	such as being respectful (e.g., respecting other people, wearing proper clothes for the country's culture, etc.) and being helpful (e.g., helping other people, etc.)
Inconsiderate and rude behaviours	Consciously and unconsciously behaviours of other tourists that performed by ignoring the rights and feelings of other people around them.	such as making noise, smoking next to the person, cutting into the line, littering, not controlling children, cursing, being drunk, constantly taking photos and videos in the environment, being commanding, being arrogant, being angry, complaining, and not wearing clothes suitable to culture and environment.
Offensive behaviour	The behaviours arising a person's lack of control and that being towards the physical action (violence) due to this lack of control and that may cause discomfort to everyone around.	such as fighting with other people and mistreatment of animals.
Illegal and prohibited behaviours	Non-compliance with rules that are written and visually present in society.	such as taking photos in public places, touching objects in public places, smoking in closed areas and using drugs.
Disgusting behaviours	The situations that are disgusting and nauseating in appearance and smell.	such as different eating habits and smelling bad.

Table 7

Participants' Statements on Satisfying and Disturbing Behaviours of Other Tourists in The Indirect Interactions

Considerate Behaviours	P26: "I am satisfied when another tourist respects the culture… For example, if an American tourist came to Turkey and I came to Turkey, and if both of us respect Turkey, and if we try to make our behaviours good, it will be good. Turkey is a Muslim country and tourists visit many attractive places. One of them is a mosque. I like tourists who dress appropriately in such places."
Inconsiderate and Rude Behaviours	P5: "Noisy situations happened one or two times in the hotel. Some tourists were really loud and they listened to loud music late at night. This disturbed me because you can't sleep around two or three in the morning due to loud music. Only sometimes they were talking very loudly, shouting and making a lot of voices in the hotel."
Offensive Behaviours	P21: "It is very important that tourists treat animals like cats, dogs. They should treat them nicely. Animals shouldn't fear people. They should sleep everywhere. But some tourists treat them very badly. They kick them. It is painful to see."
Illegal and Prohibit Behaviours	P8: "For example, when I was in Italy, Arabic people were constantly taking photos and videos in museums. Normally, it is forbidden to take photos and videos inside. But they weren't following these rules."
Disgusting Behaviours	P23: "For instance, people who come from Africa eat with their hands. They don't use spoons, forks or knives. For them, it is normal and not disgusting but for us it is disgusting. So, as I said it is their culture and for their culture eating with hands is normal maybe. But, for other cultures, it is really disgusting, it makes you annoyed because of such behaviours."

Findings from The Guide Participants

Demographic data of the participants were shown in Table 11

Table 8

Demographic Information of Tourist Guides

Age	(f)	Professional experience	(f)	Income	(f)
18-25	0	1-3 year	0	No income	0
26-35	1	4-6 year	0	1-500 ₺	0
36-45	3	7-9 year	1	501-999 ₺	0
46-55	3	10-12 year	2	1,000-1,999 ₺	0
56-65	0	13-15 year	0	2,000-2,999 ₺	0
65 and over	0	16 years and over	4	3,000-3,999 ₺	0
				4,000-4,999 ₺	7
				5,000 € and over ₺	0
Education	**(f)**	**Gender**	**(f)**	**Tour groups**	**(f)**
High school	0	Female	5	Cultural	7
Graduate	7				
Master	0	Male	2	Other	0
PhD	0				

₺: New Turkish Lira

As can be seen in Table 8, 5 of the guides participating in the study were females and 2 males. The majority of the guides (6 participants) were around the ages of 36-55. In terms of education, all of the guides had bachelor's degrees. In terms of professional experience, the majority of them (4 participants) had over 16 years of experience. In terms of income status, all of the guides had an income of around 4,000-4,999 ₺ , and in terms of the tour groups they attended, all of the guides were officials working in cultural tours.

As a result of the interview, the guides stated that the T2T interactions occurred by the sharing of information such as taking and giving advice. The guides stated that the interactions occurred in the service areas such as restaurants and hotels. So, the forms of interactions and areas of interaction were supported by the guides' opinions.

Table 9

Participants' Statements on The Forms of Interaction and Interaction Areas

Sharing information (taking and giving advice)	P6: "I have witnessed many conversations such as "I'm Colombian", "I'm from Cappadocia", "where are you going?" I hear lots of sentences for example "If you go to Cappadocia, you must get on the balloon". "If you go to Ephesus, you should definitely make this."
Interaction areas	P4: "I think hotels are the best places to interact. There were also great restaurants such as Gar Casino or Kervansaray….Namely, these are restaurants with belly dancers or folklore shows…"

The guides supported that helpful behaviours lead to tourist satisfaction. Likewise, they confirmed that other incidents disturbed tourists (e.g., such as being late, not wearing clothes suitable to the environment and culture, pushing and bumping, cutting into the line, constantly taking photos, making noise, taking photos in public areas, smelling bad, littering, complaining, discriminating, not controlling the children, cursing, etc.). Moreover, it was revealed that not wearing shoes caused disturbance to tourists.

Table 10

Participants' Statements on Satisfying and Disturbing Behaviours of Other Tourists

Helping	P3: "Giving them a place when they are accompanied by the elderly and children and helping each other on tours… These examples can go as far as giving a place in the toilet. They usually help elderly, disabled or pregnant people in their groups or another group. They are helping move the strollers up the stairs. In such cases, there are hot moments. For example, we were on the Bosphorus tour and there was a very sweet family from Iran beside us. I had a white tourist from New Zealand. When I went to the bathroom, they were fused. They probably gave each other space. He asked me where they came from and he was surprised when he answered that they came from Iran. Because Iran is a terrible country for them, very closed and with many bigot people. When they see a cute family, they are surprised and happy."
Continuous complaining	P6: "Sometimes they find the French complain a lot.... They see the French as a nation that will bark at everything and that examine everything in detail and say this is bad. Because the French are always complaining. "
Discrimination	P5: "I know their situation because I work with Middle Easterners. They generally feel they are excluded. They think that they are not loved by other tourists."
Cursing	P5: "The French are immediately barking ... Like "Oh, how does this happen!". They sometimes talk abusively. This is not welcomed by other tourists."
Taking photos in public areas	P3: "The places where I have the worst interaction are museums. These are the places that are not taken photos of. We say that no photo is taken at Dolmabahce Palace before entering…. But we are going two steps, another group is doing the same thing. For example, a Malaysian tourist takes photos, then an Indonesian takes, then an Arab, a Turkish takes... This can disturb others."
Cutting into the line	P6: "In my group, the most disturbing thing is that the line is not obeyed. In other words, people cutting into the line. They are disturbed by them."
Not wear clothes suitable for the environment and culture	P3: "It happened to me once. Many girls in shorts in the garden of Sulaymaniyah lay on the grass… Because for her there is grass and she thinks the rate is a place to lie down and have a conversation. She is not aware that he has a mosque garden and should not do it. There is nothing to be angry about. On the other hand, shocked glances look at them. For example, I warned, ''hey girls, you sleep here like that, very nice, but you can react, consequently, this is a place of worship."
Not control the children	P4: " Of course, we have problems in crowded places. We have no problems with anyone on the grass in the meadow. There are problems in places where Dolmabahce Palace, Topkapi Palace, and holy relics exist. Let's say I accompany an Argentine group, and there was turmoil at the time, people were cutting in line, the kids were jumping on the grass and they were stepping on their feet. They are also looking at us. They were cowardly, timid because they were tourists here. They cannot shout right away, as in their own country. Is it correct to shout in this country, or is the police intervening? They look at us, the guides, in such situations. As if they say that they do something. Normally they will react harder in their own country."
Continuous taking photo	P2: "Sometimes, taking photos can cause trouble. At the same point when eighty selfies are taken too long, it is a problem for other people. This is also true for Turkish groups. When they start taking pictures, they start to pretend that there is no one else in the world. One of those selfie bars sometimes disturbs other people. So, those photos can sometimes disturb both sides."

Making noise	P6: "In my groups, they were complaining about talking loudly. The Spanish groups are especially talking very loudly as if they are fighting. I guess this also exists against our group. They talk loudly too, and we absolutely disturb others. "
Littering	P2: "I think this is more for Arab tourists. It is like throwing trash, wrapping the diaper and throwing it to the edges, leaving it in the car..."
Being late	P1: "The biggest problem is being late. Today, for example, someone was fighting with someone else because of this issue. Being late, there is a lot of trouble between the groups. For example, the same situation happened to me today. I had a Moroccan couple and the group was very mixed. Even though I warned them several times, they continued, and an Indian British in the group said: "Let's leave them". And after all, they did not continue with me. I said we will meet at 18.00 there. They came there. In other words, the fact of being late causes discomfort. Especially if we are doing a daily tour, there can be very important bad events like this from time to time."
Pushing and bumping	P2: "I hear about pushing and bumping. So, there is a lot of complaints about the pushing by Asian groups. They don't want to lose their guides because they always travel with large groups. But really Asian groups have such a problem. Such as pushing, touching, preventing other groups..."
Bad smelling	P2: "There is also a situation of smell. Although it is not desired to be expressed too, sometimes it is possible when some people from some nationalities consume too many spices, if the weather is hot. It is also a cultural thing, probably because of eating too much turmeric..."
Not wearing shoes	P2: "Something happened to me in a restaurant in Sultanahmet. When we entered there in the summer heat last year, I do not know which nationality anymore, but they were Muslims. They took off their shoes, stretched out on chairs waiting for their order at the restaurant."

Discussion and Results

This study focuses on exploring situations that cause satisfaction and disturbance of tourists during interactions with other tourists and how these interactions occur, at what levels and in which places.

In this context, it was revealed that T2T interactions occurred directly, through specific interpersonal encounters, and also indirectly as they are part of the same environment. In previous studies, it has been stated that C2C interactions occurred directly through interpersonal encounters and indirectly as they are part of the physical environment and that customers can influence each other directly and indirectly. (Choo & Petrick, 2014: 373; Johnson & Grier, 2013: 306; Jung & Yoo, 2017: 123; Huang, 2008: 522; Wu, 2007: 1519; Wu, 2008: 1504).

In the study, the levels of direct interactions are divided into three groups: spontaneous interactions, close interactions, and superficial interactions. The guides supported that T2T interactions mostly occurred by sharing information such as giving and receiving advice from each other. Moreover, previous studies on interaction levels have revealed that interactions between customers are superficial, spontaneous, and close interactions (Huang & Hsu, 2009: 556-562; Jue, 2008: 138-148).

It was revealed that T2T interactions occurred in service areas and public spaces. In general, interactions occur in service areas such as hotels, hostels, restaurants, cafes, bars, airplanes, and boat tours and in public areas such as worships, airports, bazaars, shopping centers, streets, parks, museums, and tourist attractions. The guides supported that T2T interactions occurred in service areas and public areas. Likewise, Huang (2008: 527) stated that C2C interactions generally occur in service areas such as restaurants, shops, theaters, transportation, hotels, banks, and post offices.

It was found that some situations created by other tourists caused the satisfaction and disturbance of tourists. The satisfying incidents within the direct interactions and indirect interactions originated from the considerate and friendly behaviours of other tourists.

In the study, it was revealed that helpful behaviour, which is one of the considerate behaviours of other tourists in both direct and indirect interactions, is a situation that leads to tourist satisfaction. This was consistent with previous studies. For example, Grove and Fisk (1997: 73-74) found that helpful behaviours (e.g., enabling children to see an attraction clearly or facilitating efforts to maneuver a stroller or wheelchair, etc.), benevolent acts (e.g., helping with children's attention, finding lost bags, returning abandoned wallets and pens, helping with wheelchairs or strollers, taking photos, etc.), and friendly incidents (e.g., being hospitable or amiable, etc.) lead to customer satisfaction. Likewise, other authors stated that gregarious behaviours, and protocol and sociable behaviours (e.g., handshakes, personal introduction, begin a conversation, asking about the wellbeing of family, congratulating on making a good selection, being more interested in socializing, keeping the door open, etc.) lead to customer satisfaction (Martin, 1996: 153-166; Wu, 2007: 1518-1522; Wu, 2008: 1507-1510).

It was revealed that disturbing incidents within the direct interactions originated from inconsiderate and rude behaviours and hostile behaviours of other tourists. In previous studies, it was found that other customers' hostile attitudes such as being distant, impersonal and arrogant (Grove & Fisk, 1997: 74), dirty and ethnic jokes (Martin, 1996: 153-166; Wu, 2007: 1522; Wu, 2008: 1507), verbal and physical abuse (Bitner, 1994: 97-100; Huang, 2008: 527), cursing (Grove & Fisk, 1997: 73; Huang, 2008: 527), the pushing and shoving (Grove & Fisk, 1997: 72) lead to customer dissatisfaction. Likewise, the guides have also confirmed that behaviours of other tourists such as being late, discriminating, pushing/bumping and cursing lead to tourist dissatisfaction or disturbance.

It has been revealed that satisfying or disturbing incidents within the indirect interactions originated from the other tourists' behaviours and appearances. The satisfying incidents within the indirect interactions are caused by considerate behaviours of other tourists (e.g., respecting people, wearing suitable clothes to the county culture, helping people, etc.). It has been found that disturbing incidents within the indirect interactions are caused by other tourists' inconsiderate and rude behaviours, offensive behaviours, illegal and prohibited behaviours and disgusting behaviours. Similarly, in previous studies, it has been found that disturbing the order, making noise, drunkenness, unsupervised children, cursing, angry actions like kicking and hitting, smoking, quarrelling, complaining, smelling bad, and wearing dirty clothes caused the customer' dissatisfaction (Grove & Fisk, 1997: 71-78; Huang, 2008: 527; Martin, 1996: 153-166; Wu, 2007: 1522-1527; Wu, 2008:1507-1511). In the findings obtained from the guides, it has been approved that making noise, cutting the line, not controlling children, taking photos in public places, constantly taking photos in the environment, littering, cursing, complaining, not wearing clothes suitable to culture and environment and smelling bad lead to customer's dissatisfaction. In addition, it was revealed that not wearing shoes caused tourists' disturbance, and it was concluded that it was one of the incidents that would take place among the disgusting behaviours.

Indirect interactions that occurred as a result of the observation of other tourists and tourists' satisfaction and disturbance that occurred due to these interactions can be explained by social influence theory and social facilitation theories. According to social influence theory, other people affect an individual behaviorally and emotionally. This social impact can happen through many "social forces": (1) the number of other people (others), (2) temporal and spatial distance with others, and (3) the importance of other people (Kwon et al., 2016: 305). Social facilitation theory states that physical and cognitive performance is improved or impaired when an individual is being observed (Ahmad, 2016: 81). Social facilitation theory suggests that the presence of others will affect human behaviour (Kim & Choi, 2016: 387). From this perspective, tourists have an interaction with other tourists who share the same physical environment (surroundings) with them due to spatial proximity, and they feel satisfaction or disturbance by observing other tourists' behaviour and appearance. The presence of other tourists in the environment can cause tourists' satisfaction and disturbance and leads to positive and negative effects on their experiences.

Recommendations

Interactions between tourists can in general affect the service experience of tourists and their subsequent behavioural intentions. This situation is very important in terms of both the companies and the destination of delivering service. Uncomfortable behaviour of other tourists can cause negative behavioural intentions such as decreased tourists loyalty to the company, and negative word of mouth as they are dissatisfied with the service. However, if tourists are satisfied with the behaviour of other tourists, the opposite may be the case. Therefore, tourism researchers and practitioners need to understand the nature of interactions by focusing more on T2T interactions and develop practices in this direction.

Considerate, friendly, hostile, inconsiderate and rude, illegal and prohibited, offensive, and disgusting behaviours have a great impact on the satisfaction or dissatisfaction of tourists in T2T interactions. Therefore, compatibility between tourists plays an important role in tourist interactions.

Tourists in the service area may find themselves compatible with some tourists or find incompatible with others and may be adversely affected by the behaviours of incompatible tourists. Therefore, tourism managers should act as police officers about other tourists' issues and warn customers about the rules of the settings.

In addition, the groups of tourists that are compatible with each other should be brought together and that are incompatible with each other should be prevented from coming together. (e.g., families with children-families without children, smokers-non-smokers, etc.). The physical environment can be used to encourage compatible groups of tourists to interact with each other. For example, smokers and non-smokers in the service environment can be kept in separate spaces. Similarly, families with children and children can be placed in separate places so that families without children cannot be disturbed by children's voices. Therefore, the physical environment should be organized in such a way that it allows positive interaction between tourists.

In the direct interactions between tourists, disturbances caused by situations such as prejudice and discrimination are especially important. Tourists should be warned of cultural differences and sensitivities in order to avoid situations, such as prejudice and discrimination and to prevent conflicts.

In interactions between tourists, the dressing of other tourists in accordance with the environment and country culture, their general appearance and their behaviour in the environment have a great effect on the satisfaction and dissatisfaction of the tourist. Therefore, in order to eliminate the problems arising from such situations, tourists should be informed about the culture, norms, customs and traditions of the countries where they go to or the general rules of the environment. In addition, some codes of behaviour specific to the environment should be identified and communicated to them (e.g., dress code, smoking, alcohol consumption and noise level, etc.).

Personnel working in the tourism industry should be trained and motivated to prevent conflicts between tourists. Service personnel should be encouraged to establish positive encounters between tourists. Personnel should be informed of interactions taking place between tourists and educated about when to interfere with interactions between tourists. Problematic tourist types should be identified, and tourists should be intervened during the service.

Limitations and future research

In future studies, the types of interactions that occur between tourists can be measured, and a scale can be developed regarding the interactions between tourists. For future studies, by using the findings of this study, the proposed interaction elements and typologies can be measured quantitatively and contribute to areas such as market segmentation, product quality, and physical environment design. For example, destination management organizations can design their destination and brand images according to their target audience, taking into account the findings of this study.

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Thermal Environments and Visitor Attendance in Zoological Parks: Observations in A Humid Continental Climate

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Abstract

This paper reviews associations between weather and visitor attendance at two climatically similar zoological parks. This is achieved by examining weather, climate, and attendance data at the Indianapolis and St. Louis zoological parks over a period of approximately one decade. The methodological approach utilizes tourism climatology as the foundation for information gathering, display, and analysis of results. Peak days of attendance at both zoos coincide with 'warm' and 'slightly' warm days. Regarding the lowest attendances, visitors at both locations appear to display more aversion to cold thermal stress conditions than hot thermal stress conditions, however visitors at St. Louis Zoo appear to be more averse to cold conditions. Discussions regarding how social calendars and admission pricing may interact with this relationship are introduced.

Keywords

Weather, Physiologically Equivalent Temperature, Zoological Park, Tourism, Pricing, Climate

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Introduction

Many authors have indicated that in order to better understand how future climate change scenarios may broadly impact human behavior, society must first better understand how people access and interpret weather and climate conditions in the present. A better understanding of how tourism-sector participants currently behave during specific weather conditions and events can establish a stronger foundation by which research can forecast future behavior patterns (Rutty and Andrey, 2014; Kent and Sheridan, 2011; Nicholls *et al.*, 2008; Scott and Jones, 2006; Scott *et al.*, 2012; Hewer et. al., 2015).

Focusing on the short-term foundation of weather and tourism, this paper reviews how varied weather conditions may impact tourist behavior by considering the largely outdoor-oriented economic sector of Tourism, Recreation, and Leisure (TRL). Specifically, the focus of this paper is on a segment of the tourism sector that encompasses zoological parks and aquariums. This sector contributed over $22.5 billion to the United States economy in 2016, supporting 208,000 jobs and attracting 195 million visitors, a total number of visitors in excess of all major U.S. sporting events combined for the same time period (AZA, 2018). Mason (2000) has remarked that zoos as tourist attractions remain under-researched, and Davey (2007) has stated that zoo attendance patterns are in need of additional research. In recent years, this type of research is beginning to take form as zoological parks are being examined in detail regarding how present-day weather conditions and future climate change scenarios might affect zoo visitor attendances over time (Rasilla Álvarez, & Crespo Barquín, 2021; Aylen et al., 2014; Perkins, 2016; Perkins and Debbage, 2016; Hewer and Gough, 2016a, 2016b, 2016c).

This paper reviews how the ambient thermal environment—assessed with Höppe's Physiologically Equivalent Temperature, (PET)—(Höppe, 1999), interfaces with daily zoo visitor attendance by comparing two American Zoological Association (AZA) accredited zoological parks in similar climate regimes: the Indianapolis and St. Louis zoos. Analysis at these two zoological parks builds on the research findings of Perkins and Debbage (2016) who examined the Phoenix and Atlanta zoos to better understand how visitor attendances in differing geographic settings are impacted by the ambient thermal environment as described by the Physiologically Equivalent Temperature (PET).

In particular, reviewing Indianapolis and St. Louis zoos provides two new important developments in the weather-attendance relationship observed by Perkins and Debbage (2016). First, it provides using PET, an analysis of two zoos located in colder climates than previously researched but using established and repeatable methodologies. Second, because the Indianapolis and St. Louis zoos are located in similar climate regimes and are less than 250 miles apart, this paper assesses whether zoos experiencing the same general climate have consistent weather-attendance relationships.

Theoretical Background and Context

Thermal preferences in tourism

A key factor influencing tourist behavior is a tourist's personal physical comfort they experience when engaging in their chosen activity. In the event of climate change, warmer conditions, among many other variants, (Melillo et al., 2014; Pachauri et al., 2014) will likely change comfort levels which may, in turn, cause tourists and recreationists to alter their activities, perform the same activities but in different locations, or adapt to the conditions (Caldeira, 2018; Gomez-Martin, 2005). For a better understanding of the thresholds and preferences tourists have regarding the outdoor environment and the activities they engage in during their discretionary leisure time, extensive research in the TRL sector has been performed that aimed to determine the thermal conditions which are most preferred by tourists in outdoor settings. Due to the wide range of activities engaged in by TRL participants, no single universal thermal preference has been agreed upon; however, several activity-specific ranges have been outlined in the literature which assist in better determining an envelope of tourist/recreationist preference (Scott *et al.*, 2012; Gössling et al., 2012). As mentioned by de Freitas (1990), there are several weather-related parameters that are important when examining the atmosphere a tourist will experience when outdoors including rainfall, wind speed, and sunshine.

Table 1 is an update to the work of Scott *et al.* (2012) and outlines several studies within the TRL sector which define 'optimum' weather conditions for tourism. Excerpted from each study is the optimal temperature or temperature range for tourism. To provide comparison, the 'optimal temperatures' cited in the literature have been converted to the closest corresponding thermal category as specified by Matzarakis and Mayer (1996). These thermal categories are displayed in the leftmost procedural item of Figure 1 as nine categories defined by the American Society of Heating and Air Conditioning Engineers (ASHRAE, 2001 and 2004) with thresholds refined by Matzarakis and Mayer (1996); the thresholds are specified with respect to the derived Physiologically Equivalent Temperature (PET) (Höppe, 1999).

The research surveyed in Table 1 used one of three distinct methods: 'expert-based' which defines its optimal temperatures based upon the author's best determination, 'observational' which defines optimal weather and temperatures based on tourist travel departure and/or attendance data, and 'survey' which makes its determinations using both on-site and off-site climate preference surveys of tourists and recreationists. In

Table 1
A summary review of the preferred thermal conditions of varying visitors within the tourism sector

Method	Study	Year	Optimal Temperature C	Closest ASHRAE Category		Tourism Segment	Culture
Expert-Based	Bsanceot	1978	25-33	Slighly Warm	Warm	General	Global
	Mieczkowski	1985	20-27	Neutral	Slightly Warm	General	Global
	Maddison	2001	30,7	Warm		General	English
	Lise and Tol	2002	21,8	Neutral	Slightly Warm	General	French
	Lise and Tol	2002	24,4	Slighly Warm		General	Italian
Observational	Hamilton and Lau	2005	24	Slighly Warm		General	Germal
	Hamilton et al.	2005	14	Slightly Cool		General	Global
	Bigano et al.	2006	16,2	Slightly Cool		General	Glow
	Perkins and Debbage	2016	-	Slightly Warm	Warm	Zoological Park	SE USA
			-	Slightly Warm	Warm	Zoological Park	SW USA
	Gomez-Martin	2006	22-28	Neutral	Slightly Warm	General	Spanish
	De Freitas et al.	2008	-	Slightly Warm	Warm	Beach	Canadian
	Scott et al	2008	23	Slightly Warm		Urban	Multicultural
			21	Neutral		Mountain	Multicultural
			25	Slightly Warm		Beach	New Zealand
			27	Slightly Warm		Beach	Canadian
			29	Warm		Beach	Swedish
	Rutty and Scott	2010	27-32	Slightly Warm	Warm	Beach	Multicultural
			20-26	Neutral	Slightly Warm	Beach	Multicultural
Survey	Wirth	2010	20-26	Neutral	Slightly Warm	Urban	German
	Moreno	2010	28	Slightly Warm		Beach	Western European
	Lin	2010	21-23	Neutral		Urban	Taiwanese
	Hewer et al	2016	<33 summer	Warm		Nature park	Canadian
			<29 shoulder	Slightly Warm			
	Hewer et al	2015	24-31	Slightly Warm	Warm	Nature park	Canadian
	Andrade et al.	2011	32-28	Slightly Warm		Urban	Portuguese
	Rutty and Scott	2015	32-39	Warm	Hot	Beach	Multicultural
	Scott et al.	2016	23-25	Slightly Warm		Urban	Multicultural

Table 1, 'tourism segment' refers to the target tourist activity of those questioned. 'General Tourism' can largely be defined as sightseeing tourism or "slow steady walking" (Mieczkowski, 1985). 'Culture' describes the origin of the people who were either observed or surveyed to obtain the results.

While there is a large array of differing results, some key points emerge from an overall survey of the findings in the literature (Table 1). First, those studies assessing either a 'global' culture or a 'general' tourism segment indicate a wide range of possibilities for 'optimal' thermal preferences. For example, Hamilton and Lau (2005) and Bigano *et al.* (2006) utilized international tourist arrival data to determine the thermal preferences of tourists; both resulted in the optimal thermal temperature coinciding with the 'slightly cool' ASHRAE category. Conversely, Maddison (2001), in a review of general tourism demand for travelers from the United Kingdom, found an optimal temperature coinciding with the 'warm' ASHRAE category. Second, the intent and likely activity of the vacationer appeared to modify the thermal preferences (Gomez-Martin, 2005). Generally speaking, beach tourism appears to have the warmest thermal preference and mountain tourism the coldest, with urban tourism falling between these anchor points. Zoological park tourism (Perkins and Debbage, 2016) most resembled results seen in 'urban' tourism; this finding is expected given the metropolitan location of zoos in this research. Third, visitor origin also influenced the optimal thermal assessment, and, in general, tourists had a personal preference for conditions that were in higher contrast to the prevailing climate of their home locations. Among beach vacationers, Scott *et al.* (2008) found that Swedish respondents had a stated thermal preference (29°C) which was warmer than both New Zealand (25°C) and Canadian (27°C) respondents. The role of culture and thermal preference is discussed in detail by Lam et al., (2016) who emphasize that there are fundamentally different preferences and sensations depending on the nationality and culture of the visitor.

Weather and attendance at zoological parks

With these thermal comfort preferences in mind, a growing body of literature assessing the impact of weather on attendance has emerged in recent years, however, there is little consensus regarding the appropriate combination of weather variables used in this type of analysis (Perkins and Debbage, 2016). De Freitas *et al.* (2008) suggested the use of biometeorological variables such as the Physiologically Equivalent Temperature (PET) to more accurately capture the physiological conditions a person may experience. They concluded that this type of personalized weather variable may provide a more concrete link to how tourists might react to the outdoor thermal environment.

Following this suggestion, Perkins and Debbage (2016) focused on the relationship between visitor attendance and coinciding ambient thermal conditions as measured by PET-based thermal categories at the Phoenix and Atlanta zoos. In this research, it was concluded, generally speaking, there could be a 'universal thermal preference' in the PET-based thermal categories of 'slightly warm' and 'warm' in both Phoenix and Atlanta. The lowest attendances on record appeared to coincide with the most common thermal extreme condition for each location where low attendance days in Phoenix coincided with 'very hot' thermal conditions, while in Atlanta, the lowest attendance days coincided with 'very cold' thermal conditions. Perkins and Debbage (2016) concluded that overall attendance-weather relationships may be partially a product of the climatology of the "extreme thermal" conditions (p. 13). For example, visitor attendance at Phoenix Zoo appeared to indicate a greater amount of 'heat aversion' than visitors in Atlanta. It was hypothesized that this occurred because residents of Phoenix might be reacting to a possible "saturation point" (p. 10) where they chose not to adapt to or tolerate the prevailing thermal extreme, particularly regarding their discretionary leisure time; instead, they may have been employing "short-term coping measures" (Hayden *et al.,* 2011 p. 278).

Other studies assessing how weather impacts attendances at zoos have integrated a different set of assessment variables to connect the ambient atmospheric environment to zoo attendance. Aylen et al., (2014) assessed this impact at Chester Zoo in North West England over a period of thirty three years, January 1978 to December 2010. The weather variables assessed in this research were daily rainfall and temperature and were controlled by taking into consideration other elements such as seasons, holidays, response lags, special events, and social factors such as fuel shortages. Overall, it was found that the relationship between temperature and visitation is non-linear where 21°C served as the peak attendance threshold, with falling attendances regarding both cooler and warmer temperatures. Rainfall impacted attendance by discouraging attendance, but also by redistributing attendance as visitors tended to arrive a day after weather improved. Overall, however, social factors and seasonal trends were the overriding non-weather variable in these models.

Hewer and Gough (2016a) analyzed temperature, wind, and precipitation data coupled with daily attendance data at Toronto Zoo and found a variety of nuances in the relationship. For example, while temperature was the most influential variable in their analysis, it varied based on the season indicating that the interpretation of or response to temperature might be contextual rather than absolute. During the shoulder season 26°C appeared to be a temperature threshold, however, in the peak season this changed to 28°C. Among precipitation, they found that there was also a nonlinear relationship as small amounts of precipitation less than 2mm would result in a 50% reduction in attendance, while additional amounts of precipitation would generally have little impact on further attendance decreases. Research by Hewer and Gough (2016a, 2016b, 2016c) has also incorporated non-weather factors in predictive models to better account for influential social aspects that likely modify a visitor's interpretation of the weather, or even overrides their consideration of the weather such as holidays, day of week, off/peak/shoulder seasons and special events.

Methods

Climate data are displayed at each zoo within the context of the visitor/tourist where the visitor is consuming an experience in the ambient environment and therefore can be considered as 'part' and 'subject to' their environment. Therefore, the weather conditions should have a direct impact on their behaviors. As a result, a physiological atmospheric variable assessing the well-being of the tourist likely contributes to whether they decide to spend time and money at a zoological park.

To assess the thermal physiological conditions the tourist was most likely experiencing during their visit, the Physiologically Equivalent Temperature (PET) was used. This variable choice was made following the suggestions of de Freitas *et al.* (2008) and the methods of Ploner and Brandenburg (2003), Brandenburg and Ploner (2002) and Perkins and Debbage (2016) because the PET represented a more specified measure of ambient thermal conditions that a visitor may 'feel' during their visit to the zoo. The thermal condition, though not entirely encapsulating the whole of the weather condition, is seen as an important variable in tourism (Scott et al., 2008) research and provides additional specificity frequently used in outdoor tourism studies (Lin *et al.,* 2009, 2009; Matzarakis and Mayer, 1996).

In this research, PET was used to ensure comparability with the Perkins and Debbage (2016) findings at Phoenix and Atlanta zoos. Pantavou et al., (2018) however, explain key differences between the PET and the Universal Thermal Climate Index (UTCI) (Blazejczyk, 2012), another commonly used thermal index in research. Applied today, PET and UTCI are both used in outdoor thermal comfort research, (Rozbicka and Rozbicki, 2020; Klock et al., 2019; Manavvi and Rajasekar, 2021; Baruti et al., 2019) among others such as the Weather Suitability Index (WSI) (Anna et al., 2020) and the Thermal Sensation Vote (TSV) (Sharmin and Steemers, 2020). Notably, none of these indices is agreed upon in exclusivity (Lenzholzer and Nikolopoulou, 2020) and in some instances such indices may be further adapted (Wang et al., 2021; Talhi et al., 2020; Chen et al., 2020) for application.

Weather data:

To calculate the PET, weather data at both zoos were obtained from the nearest hourly-data National Weather Service (NWS) Automated Surface Observing Systems (ASOS) station. The ASOS station used for Indianapolis Zoo is located at Indianapolis International Airport 7.0 miles SW of the zoo; the weather station used for St. Louis Zoo is located at Lambert-St. Louis International Airport 8.7 miles NNW of the zoo. Ideally the weather data would be obtained on-site at each zoo as there will inevitably be differences across space. Generally, while spatial variation in the thermal component is slight over distances less than 10 miles (which have limited topographic changes), the same assumptions cannot be made for precipitation and wind data. Given the design elements of each zoo, it is likely that zoo visitors experience increased shading at each location compared with the ASOS location. Elnabawi and colleagues (2016) highlight in a park setting the shading benefits during hot summer months but also emphasize decreased wind flow and evaporative cooling from a dense canopy leading to some degree mixed results. Additionally, in the winter, depending on the tree type (evergreen versus deciduous) shading may occur to the discomfort of the visitor. With these limitations in mind, the authors of this research surmise that although the weather stations are not located inside each zoological park, they are close enough to assume that weather conditions occurring at the weather stations represented a reasonable proxy for weather experienced at each zoo, particularly for a study focused on the thermal condition.

Adapted from Perkins and Debbage (2016), Figure 1 describes the methodological process where hourly weather data were converted to the derived PET values and then assigned to a nine-point thermal sensation scale. This scale uses the European standard established by Matzarakis and Mayer (1996). Overall, PET was calculated every hour from 7am to 7pm using temperature, wind speed, sky cover, and relative humidity, yielding thirteen data points per day. Of these thirteen data points, the warmest and coldest thermal categories were selected to represent the daily high and low PET-based thermal category values.

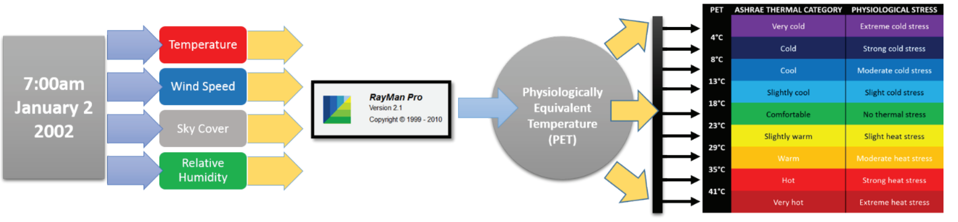

Figure 1: Methodological process of converting hourly weather data to a PET-based thermal category from Perkins and Debbage (2016)

In previous research, Perkins (2012) determined that when compared with daily average and daily low PET values, daily high PET value predicted visitor attendances best. This is because the daily high PET represented thermal conditions when most visitors were likely to be at the zoo. While not part of the PET calculation, this research also utilizes several key climate variables in Indianapolis and St. Louis. To capture the general climates, thirty-year climate normals from 1981 to 2010 were used in the comparison (NOAA, 2014), additionally, using hourly ASOS station rainfall measures, rainfall occurring during the open hours of each zoo is included in a separate analysis.

Visitor data

Visitor attendance was calculated using daily attendance data collected from September, 2001, to June, 2011, at each zoo. This time period was selected because it represented a period where at each zoo there was no significant change in the array of attractions or in the admission pricing structure. Both zoos are located in major metropolitan areas and each zoo is positioned within the urban downtown area. The visitor length-of-stay is comparable as the average visitor spends approximately three to four hours per trip (Personal communication, 2015a, 2015b). Because visitors plan to spend several hours outdoors when visiting, they most likely consider the daily weather in their planning decisions. The Indianapolis and St. Louis zoos largely attract day-trippers within the metropolitan areas of Indianapolis and St. Louis. For example, at Indianapolis Zoo, 85% of the guests are from the state of Indiana (Personal Communication, 2015c); at St. Louis Zoo 65% of guests are classified as 'area residents' from the local ten-county metropolitan area (Personal Communication, 2015d). Due to the large percentage of visitors who are local and have less fixed schedules, it is likely that visitor decisions may be more aligned with weather conditions than they would in other outdoor tourist venues with larger shares of non-local visitors. This logic is supported by findings from Nicholls *et al.* (2008) and Hewer et al. (2017, 2018) who observed that tourists who traveled longer distances were more sensitive to weather conditions than those tourists who were more proximate to the tourism location. These relationships can be complicated however because it should also be noted that there is a possibility that visitors from outside the immediate areas (15% Indianapolis; 45% St. Louis) could, instead, be less sensitive to the weather due to fixed vacation schedules. Such tourists who are non-local can contribute to lower correlations between expected attendances and the weather. In fact, Rasilla Alvarez and Crespo Barquin (2021) found in a zoo in Northern Spain that the "sensitivity of zoo visitation to weather variability was seasonally dependent" and less sensitivity was seen in summer months, indicating that varying socio-economic factors interact with the impact of the weather. Regarding populations, both zoos are located in large metropolitan areas with similar populations. The Indianapolis Combined Statistical Area (CSA) contained approximately 2.1 million residents; the St. Louis CSA had 2.9 million residents in 2012 (U.S. Census, 2012).

Data analysis:

The seasons as defined in this study consist of a 'high season' (May, June, July), a 'shoulder season' (March, April, August, September, October), and a 'low season' (November, December, January, February) of attendance. 'Seasonal' divisions were made with respect to both zoological parks and their attendance records.

Seasonal analysis does not capture the entire social calendar of availability. Because of this, within each of these seasons, days were subsequently divided into weekends and weekdays. Weekends consisted of Saturdays and Sundays, weekdays consisted of Mondays through Fridays. This distinction was based on the belief that potential attendees would have more time availability on weekends and therefore this time availability might have an influencing factor on their attendance despite the weather conditions.

Pursuant to Perkins and Debbage (2016), attendances were subsequently grouped within each season and for weekend/weekday, and grouped accordingly into four statistically-based attendance categories called Attendance Day Typologies (ADTs):

· Poor attendance days: daily visitor attendance less than one standard deviation below the mean daily attendance

· Average attendance days: within one standard deviation of the mean daily attendance

· Good attendance days: between one and two standard deviations above the overall daily attendance mean

· Excellent attendance days: attendance more than two standard deviations above the daily attendance mean

The imbalanced nature of these groupings is purposeful. Two ADT categories exist above the 'average' category with only one ADT category below the 'average' category. This is because high attendance days' have a "disproportionate impact on overall attendance" (Perkins and Debbage, 2016 p.5). For example, though attendances at the Indianapolis and St. Louis zoos fell within the 'good' and 'excellent' categories an average of only one day out of every seven (14.3%), the total visitor attendance for these two ADTs accounted for an average of 43.5% of the total yearly visitor attendance. Additionally, attendance groupings were made in their respective isolated groups to account for predicable social constructs (day of week and month) where a 'poor' attendance on a high season weekend might actually be higher than an 'excellent' attendance on a low season weekday. This was done in order to determine if certain weather fluctuations in the context of the social calendar might have an impact on attendance. Without these distinctions, the impact of weather has the potential to be conflated with differences in the day of the week or month, decreasing the reliability of results.

Dividing good and excellent attendances within small categories such as 'weekends' unfortunately decreased the number of observations to where the statistical reliability of any meaningful results was compromised. As a result, a 'top attendances' category was created that encompassed the top two standard deviations of attendances ('good and 'excellent') for a given season and weekend/weekday. Doing so yielded more observations while still capturing the research intent of a 'top attendances' variable.

Results

Overview of attendances

From September 2001 to June 2011 Indianapolis and St. Louis zoos attracted a total combined attendance of over 39 million visitors. During this period, Indianapolis Zoo averaged approximately one million visitors per year while St. Louis Zoo attracted over 2.9 million visitors on an annual basis. An Independent t-test was conducted, and overall, there is a significant difference between attendance at the IND and STL zoos ($t(22) = 3.77$, $p = .001$); MSTL = 254.58; MIND = 86.67), with STL having significantly greater attendance than IND.

To provide further context for the attendance differences between Indianapolis and St. Louis zoos, Figure 2 illustrates the average monthly attendances at both zoos. What is clear from this comparison is that while there are significant absolute differences in attendance volumes, with respect to the seasonal pattern in visitation, these two zoos are very similar. Particularly, the peak months of attendance at both zoos occur from May through July with lower levels of attendance in the adjacent 'shoulder seasons'. The lowest attendance occurs during the winter months from November to February in spite of various holidays, suggesting that the ambient thermal conditions may contribute to these attendance patterns at both zoos.

To verify this, a Pearson correlation was conducted assessing the relationship between IND and STL attendance by month. A significant positive relationship was observed ($r^2 = .92$, $p < .001$), indicating that the rank order of attendance was the same for both zoos. To assess the curvilinear relationship between attendance and months, two separate curve estimations were conducted, one for each of the zoos. For both IND and STL zoos a significant quadratic function/correlation was observed; for the STL zoo ($r^2 = .88$; $F(2,9) = 31.53$, $p < .001$), for the IND zoo ($r^2 = .70$; $F(2,9) = 10.51$, $p = .004$). As can be seen there is a stronger curvilinear relationship in attendance for STL vs that of IND. Additionally, the magnitude of increase from January to June was greater for STL vs IND ($b = 150$ vs $b = 59$) and the magnitude of decrease in attendance from June to December was greater for STL vs IND ($b = -12.12$ vs $b = -4.2$).

Figure 2 also illustrates the average daily attendance by Attendance Day Typology (ADT) of all days in the period of record and provides ratios indicating what percentage of the attendance in St. Louis is matched by Indianapolis. For example, within the 'poor' ADT, average daily Indianapolis Zoo attendance only matches 7% of the attendance at St. Louis Zoo; for the highest days of attendance in the 'excellent' ADT, the daily attendance in Indianapolis comprises only 39% of the attendance in St. Louis. Most significant though, is the trend across ADT categories in the Indianapolis to St. Louis ratios where a large drop is observed between the 'average' and 'poor' ADT categories. It is hypothesized that this sudden change in ratios may be tied to the difference in admission fees between the two zoos. If admission pricing is the reason behind this sudden change in ratio, it would indicate that for 'poor' days of attendance, the 'free-admission' policy of St. Louis Zoo could encourage more people to attend because there is no substantial financial loss in the event poor weather conditions shorten a visit. Conversely, this would also indicate that on 'poor' days of attendance, the $14 admission price at the Indianapolis Zoo may be higher than most visitors are willing to pay, given the environmental conditions. Though not conclusive here, understanding differences in weather conditions between 'average' and 'poor' days of attendance could better illustrate how visitors may value weather conditions.

Number of days represented by ADT				
	Poor	Average	Good	Excellent
Indianapolis Zoo	526 (14.7%)	2474 (68.9%)	426 (11.9%)	164 (4.6%)
St. Louis Zoo	504 (14.1%)	2467 (69.0%)	437 (12.2%)	168 (4.7%)
Total attendance by ADT				
	Poor	Average	Good	Excellent
Indianapolis Zoo	31,863 (0.3%)	5,369,595 (54.1%)	2,903,326 (29.3%)	1,614,481 (16.3%)
St. Louis Zoo	454,110 (1.6%)	16,596,336 (57.0%)	7,804,123 (26.8%)	4,247,332 (14.6%)
Average daily attendance and attendance ratio by ADT				
	Poor	Average	Good	Excellent
Indianapolis Zoo	60	2,171	6,815	9,844
St. Louis Zoo	877	6,727	17,858	25,282
IND/STL	0.07	0.32	0.38	0.39

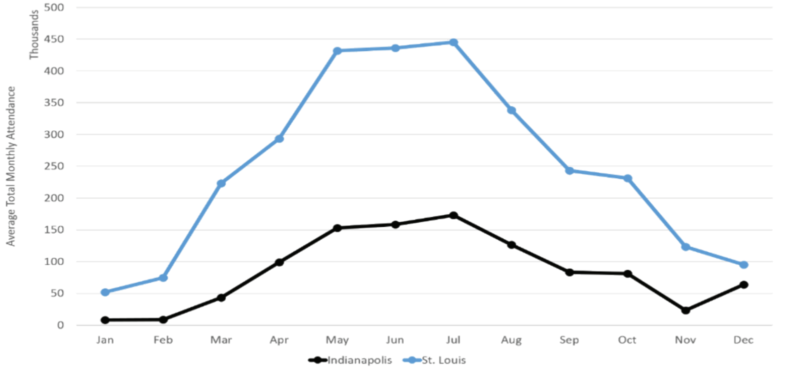

Figure 2: Attendance comparisons at Indianapolis and St. Louis Zoos 2001-2011

Looking deeper at the results, Table 2 displays the attendance 'seasons' used in this research and the relative differences across categories. These groupings are likely due to both meteorological factors and the increased availability of school-aged children during the traditional 'summer vacation' within the United States. The number of days analyzed is not equal across seasons because months have been selected due to their overall attendance patterns throughout the study. The shoulder seasons comprise a period of falling attendance in the months of August, September, and October and a period of increasing attendance in the months of March and April. While the moving average trends are different within these two aspects of the shoulder season, the average daily attendances within the increasing and decreasing portions of the shoulder seasons were similar and did not necessitate a different seasonal analysis. Within all seasons, the St. Louis Zoo has significantly higher attendances. Comparing weekend and weekday average attendances within the high season, daily weekday attendances comprise between 68% (STL) and 75% (IND) of weekend days. Differences in the weekday to weekend ratios are observed more in the low and shoulder seasons where weekday attendances are approximately half (between 45% and 52%) the magnitude of weekend daily attendances. This is, again a likely product of the social calendar and time availability during these months.

Table 2
Attendances at the St. Louis and Indianapolis Zoos

Season	High		Low		Shoulder	
Months Represented	MAY; JUN; JUL		NOV; DEC; JAN; FEB		MAR; APR; AUG; SEPT; OCT	
	STL	IND	STL	IND	STL	IND
Average Daily Attendance	14,272.89	5,255.14	2,923.03	999.30	8,646.57	2,805.19
Total Attendance	12,688,597	4,671,822	3,452,098	1,045,272	12,961,206	4,202,171
Number of days	889	889	1,181	1,046	1,499	1,498
Average weekend	18,554.04	6,375.44	4,508.42	1,490.65	13,898.19	4,623.82
Average weekday	12,561.63	4,807.02	2,287.37	768.81	6,547.88	2,077.73
Weekday attendance % of wknd	68%	75%	51%	52%	47%	45%

More detail is provided in Table 2 where attendances at the St. Louis Zoo are significantly higher than those at the Indianapolis Zoo on a consistent basis. Table 2 shows the average daily attendances and the percentage of days occurring within each thermal category within all six divisions of the tourism climatology representing weekends and weekdays within the high, low, and shoulder seasons. The ratio between the Indianapolis Zoo and St. Louis Zoo attendances is displayed for the categories and varies between 38% and 32% indicating the fraction of visitors at the Indianapolis Zoo as compared with the St. Louis Zoo during the same periods of time. What is apparent from these representations is that there exists no meaningful trend or impactful difference within these individual groupings indicating roughly the same attendance patterns over the social calendar. Increases/decreases of attendances on weekends/weekdays or in the high/low season appear to be mimicked across zoos at this level of analysis.

Overview of tourism climatology

Outlined in Table 3 are several key general climate variables in Indianapolis and St. Louis. To capture the general climates, thirty-year climate normals from 1981 to 2010 were used in the comparison (NOAA, 2014). What is apparent from Figure 3, is that both locations have similar climates; however, St. Louis, in general, is warmer in both the warmest and coldest months. Further, St. Louis has more hot days above 32°C and fewer cold days when low temperatures drop below freezing. Precipitation regimes between the locations are very similar both in their temporal distributions of the wettest and driest months and in annual precipitation totals.

Table 3
Climate comparisons of Indianapolis and St. Louis

30 Year Climate Normals 1981-2010	Indianapolis	St. Louis
Warmest Conditions	July 24.1 C	July 31.7 C
Coldest Conditions	January -2.2 C	January 4.4 C
Driest Conditions	February 58.9mm	January 61.0mm
Wettest Conditions	May 128.3mm	May 119.9mm
Annual Precipitation	1,078mm	1,040mm
Days above 32 C	18	43
Days below 0 C	103	84
Koppen-Geiger Classification	Dfa	Dfa/Cfa

Figure 3 displays the percent share of daily PET-based thermal categories at each zoo from September 2001 to June 2011. The categories in Figure 3 represent the proportion of the number of days falling within a particular PET-based thermal category where the day in question was represented by the warmest PET-based thermal category occurring between 7am and 7pm. Table 3 and Figure 3 indicate that Indianapolis and St. Louis have similar thermal profiles. In both locations, the most frequently occurring thermal category was ‘very cold’ which occurred 30% of the time in Indianapolis and 24% of the time in St. Louis. The two zoos are also comparable regarding the more moderate thermal conditions. The proportion of days falling within ‘warm’ through ‘cool’ thermal categories was 49% in Indianapolis and 48% in St. Louis. The difference is greatest between zoos in the thermal categories representing the warmest conditions where ‘hot’ and ‘very hot’ thermal categories combined represented only 13% of all the days in Indianapolis but 21% of the days in St. Louis. How these thermal regimes shape and influence daily visitor attendance at each zoo during the study period is less clear.

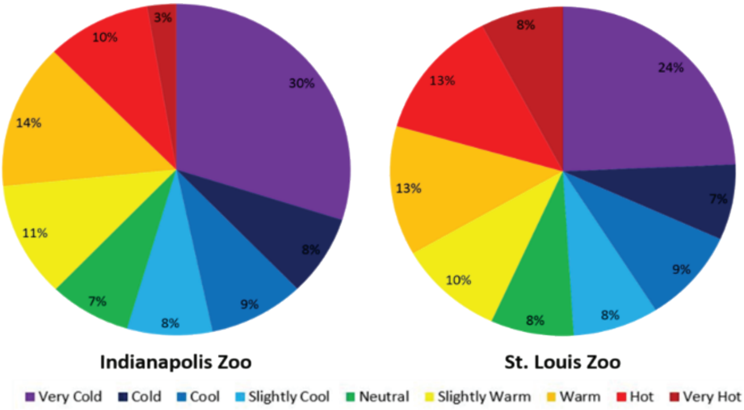

Figure 3: Proportion of PET categories experienced by zoo

The tourism climatology derived for visitors for the St. Louis and Indianapolis Zoos is displayed in Table 4. What is apparent in this table is there is little difference between the zoological parks regardless of season or day-of-week. The largest differences between the zoos emerge in the proportions of 'very hot' days in both the weekend and weekdays of the high season where St. Louis Zoo visitors experience 13% and 14% greater incidences of this event than do the visitors at Indianapolis Zoo. This corroborates climate normal data, highlighting that St. Louis is generally a slightly warmer location than Indianapolis. The same phenomenon is observed in low season weekends and weekdays where Indianapolis Zoo visitors experience 17% and 8% more 'very cold' days than those in St. Louis. All other observations exhibit differences of 8% or less in terms of the thermal category representation. Although not analyzed in this research, precipitation was recorded for comparative purposes to establish knowledge regarding the similar climates between zoos. As determined, precipitation days (defined as greater than 'trace': .01in) are similar across zoos as the maximum difference between the number of precipitation days is 6% occurrence in the high season weekends and the low season weekdays.

Table 4

Season	**High**						**Low**						**Shoulder**					
Time	**Weekend**			**Weekday**			**Weekend**			**Weekday**			**Weekend**			**Weekday**		
Zoo	Indiana-polis	St. Louis	Differ-ence	Indiana-polis	St. Louis	Differ-ence	Indiana-polis	St. Louis	Differ-ence	Indiana-polis	St. Louis	Differ-ence	Indiana-polis	St. Louis	Differ-ence	Indiana-polis	St. Louis	Differ-ence
Very Cold	0%	0%	0%	0%	0%	0%	74%	58%	17%	72%	64%	8%	14%	10%	4%	12%	8%	4%
Cold	2%	1%	1%	1%	0%	1%	10%	18%	-8%	14%	12%	1%	9%	7%	3%	8%	6%	2%
Cool	5%	4%	1%	3%	2%	1%	10%	10%	0%	9%	11%	-3%	12%	11%	0%	12%	12%	1%
Slightly Cool	7%	5%	2%	7%	4%	3%	3%	8%	-5%	4%	6%	-2%	10%	11%	0%	13%	12%	1%
Neutral	12%	8%	4%	11%	9%	3%	1%	4%	-2%	2%	4%	-3%	12%	7%	4%	10%	12%	-2%
Slightly Warm	19%	13%	7%	19%	14%	5%	1%	2%	-1%	1%	2%	-1%	14%	16%	-1%	15%	14%	2%
Warm	26%	25%	0%	31%	24%	8%	0%	0%	0%	0%	0%	0%	17%	17%	0%	16%	16%	1%
Hot	23%	25%	-2%	24%	29%	-6%	0%	0%	0%	0%	0%	0%	9%	13%	-4%	9%	14%	-5%
Very Hot	6%	20%	-13%	5%	19%	-14%	0%	0%	0%	0%	0%	0%	4%	8%	-4%	3%	7%	-4%
Precipitation Days	27%	21%	6%	28%	28%	0%	22%	18%	4%	24%	18%	6%	19%	18%	1%	23%	22%	1%
Average Daily Attendance	6.375	18.551		4.807	12.562		1.491	4.508		769	2.287		4.624	13.898		2.078	6.548	
IND:STL Attendance Ratio	34%			38%			33%			34%			33%			32%		

Overview of attendances with respect to varying meteorological parameters

As a general overview, distribution of PET-based thermal categories based on the percentage share of each Attendance Day Typology (ADT) for both zoos is also illustrated in Figure 4. ADT categories in Figure 4 are based on the entirety of the dataset and not sectioned by season or day-of-week in this overview. In Indianapolis and St. Louis, respectively, 85% and 87% of the 'poor' ADT was comprised of days that experienced 'very cold' thermal conditions. This finding indicates the possibility of the 'thermal aversion effect' (Perkins and Debbage, 2016) where, specifically, 'cold aversion' may have influenced visitor attendance choices. For example, though residents of Indianapolis and St. Louis are exposed to 'very cold' thermal conditions more than any other thermal category, this does not mean that zoo visitors have adapted to these conditions or have developed elevated thermal tolerance levels. In fact, because of the high shares of 'very cold' thermal conditions observed in the 'poor' days of attendance, quite the opposite trend appears to be happening. This suggests that residents of both Indianapolis and St. Louis may have reacted to a possible 'saturation point' where zoo visitors displayed 'extreme temperature aversion' (Perkins and Debbage, 2016) and chose not to tolerate the prevailing cold extremes with respect to their discretionary leisure time. This concept of a 'saturation point' or thermal threshold is further underlined with findings regarding the nonlinearity of temperature-tourism relationships (Rossello and Santana-Gallego, 2014; Hewer et al, 2015; Hewer et al., 2016a; Aylen et al., 2014; Falk, 2014).

Peak representations of the highest days of attendance on record at the Indianapolis Zoo are within the 'slightly warm' and 'warm' thermal categories, both of which represented 27% of all the days within the 'excellent' ADT. By contrast, a clear bias toward the 'warm' thermal regime was observed in St. Louis with respect to the 'excellent' ADT where 'warm' days accounted for 33% of this ADT and their percentage shares dropped to 19% within the 'slightly warm' thermal category. What is apparent in the findings from the 'excellent' ADT is both zoos are very comparable in terms of the thermal category generating the highest visitor attendances.

Regarding the 'good' ADT category, St. Louis Zoo showed a much higher representation of 'hot' days and a slightly lower representation of 'warm' and 'slightly warm' days when compared with Indianapolis Zoo indicating that St. Louis visitors, in general, may have preferred slightly warmer thermal regimes. Again, in the 'excellent' ADT category, St. Louis Zoo visitors appeared to prefer warmer

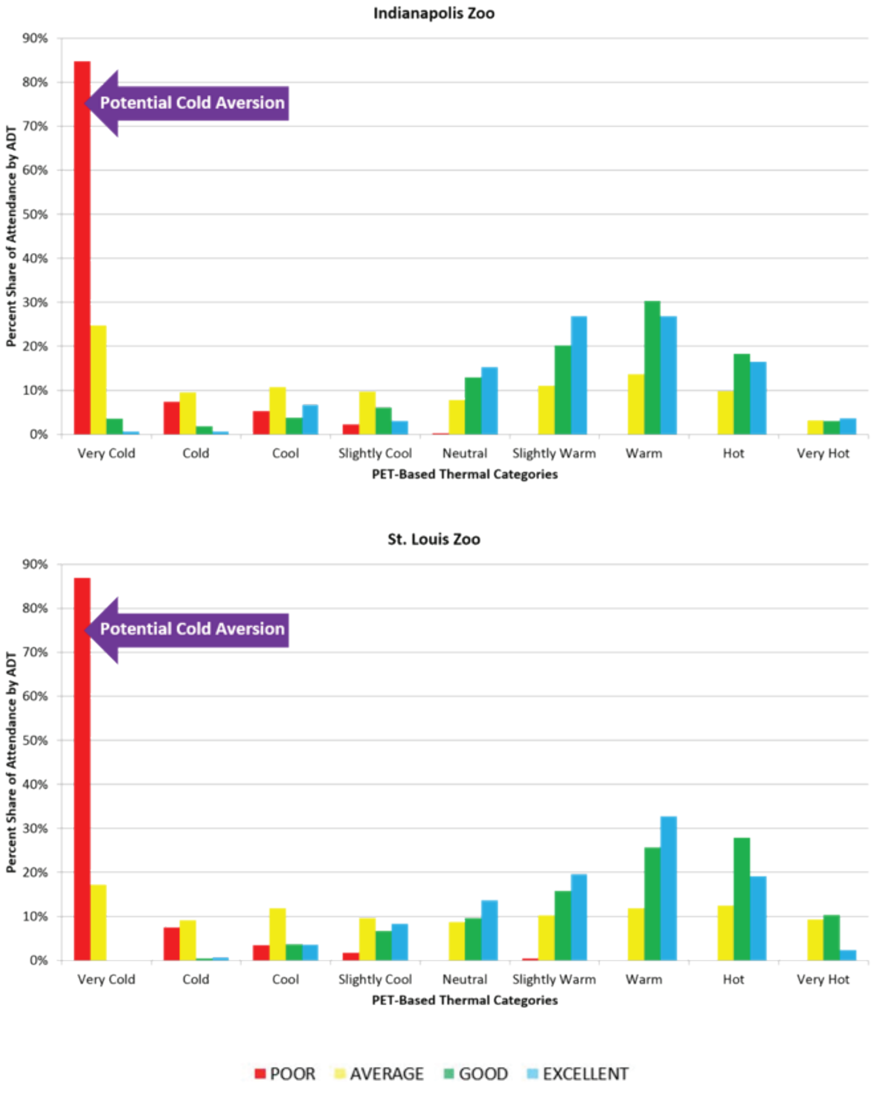

Figure 4: Overview of PET-based thermal categories and attendance

thermal regimes as Figure 3 indicates a higher representation of 'hot' and 'warm' days and a lower representation of 'slightly warm' and 'neutral' days than observed at Indianapolis Zoo. Data seem to suggest that on peak attendance days St. Louis Zoo visitors may have acclimatized to become more 'heat tolerant' than visitors to Indianapolis Zoo.

Although physiological acclimatization may be occurring, what also could be driving the warmer temperature preferences in St. Louis is free-admission pricing and schedule availability. For example, visitors to the St. Louis Zoo may visit despite 'hot' thermal conditions, because, if it becomes too uncomfortable, they can leave with limited financial repercussions. Conversely, at Indianapolis, while 'hot' thermal regimes do not severely decrease attendance, to some visitors, the 'strong heat stress' in 'hot' thermal conditions may be too uncomfortable to justify paying a non-refundable $14 admission, and, therefore, they do not attend, particularly in the summer months which tend to have more 'available' days for typical zoo visitors.

Figure 5 shows the variance of the thermal PET categories with attendance within each of the three established attendance 'seasons'. Similar results were found within each weekend/weekday grouping but are not included in Figure 5. Because this is a PET thermal analysis, days with precipitation were purposefully excluded to remove additional confounding variables. Table 5 does show however, the importance of precipitation on attendance in that top attendance days had lower representations of precipitation days than the climatology of the record. What is apparent overall in Figure 5 is that there is a preference for slightly warm and warm conditions at both zoos across all seasons. In the shoulder and high seasons, when conditions hotter than 'warm' occur, attendances begin to decrease at both zoos. Additionally, attendances begin to decrease in the shoulder seasons when the thermal condition is cooler than 'neutral'. This decrease is seen more gradually in Indianapolis where neutral thermal conditions are peak conditions for attendance and more drastically in St. Louis where neutral thermal conditions are detrimental. Conditions cooler than 'neutral' see declines in attendance at both zoos. In the low season where conditions hotter than 'slightly warm' are rare, at both zoos the trend is positive where the warmer the thermal condition is, generally the higher the attendances. The presence of outliers, while not explained in this research do indicate that there are many other unaccounted variables influencing attendances at the zoological parks that trump the influence of the thermal conditions on attendance patterns. Overall, however, slightly warm and warm days do tend to produce the highest levels of attendance in both averages and outlier attendance increases.

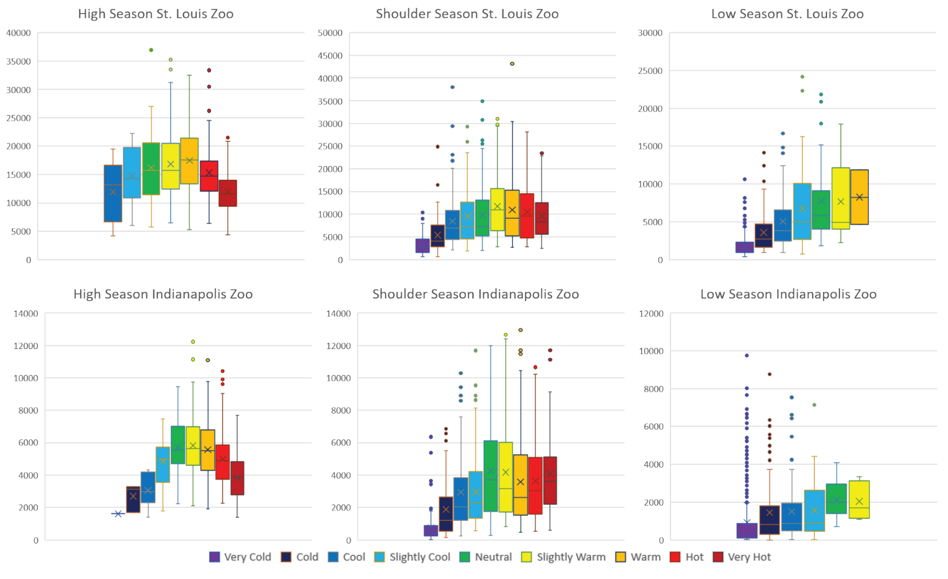

Figure 5: Thermal category and attendance thresholds by season

When comparing Table 4 and Table 5, the differences between the tourism climatology for all days and that for the top attendances are subtle in both high and shoulder seasons. In these seasons, though, there are increasing proportions of 'warm' and 'slightly warm' categories indicating their positive influence on attendance. Within the high season, differences between climatology and top attendances in the thermal category representations vary from 0% upwards to 18%, where the maximum difference is on weekdays for the 'hot' thermal category. This difference can be partially explained with the differences in climates between locations (St. Louis slightly hotter) but also points to St. Louis potentially having a hotter thermal preference than Indianapolis. Additionally, within shoulder seasons, when comparing all attendances to top attendance days, differences vary from 0% to 13% where the maximum difference is the increased incidence of 'slightly warm' days on shoulder season weekends at Indianapolis Zoo. This result indicates a potential for visitor preferences in the 'slightly warm' category. Overall, within the shoulder season, the presence of days warmer than an 'ideal' thermal condition tends to have less of a negative impact on top attendance days than presence of days cooler than an 'ideal' thermal category (Figure 6).

Table 5

Season	High						Low						Shoulder					
Time	Weekend			Weekday			Weekend			Weekday			Weekend			Weekday		
Zoo	Indiana-polis	St. Louis	Differ-ence	Indiana-polis	St. Louis	Differ-ence	Indiana-polis	St. Louis	Differ-ence	Indiana-polis	St. Louis	Differ-ence	Indiana-polis	St. Louis	Differ-ence	Indiana-polis	St. Louis	Differ-ence
Very Cold	0%	0%	0%	0%	0%	0%	64%	2%	62%	67%	20%	47%	0%	0%	0%	0%	0%	0%
Cold	0%	0%	0%	0%	0%	0%	6%	7%	-2%	18%	15%	3%	0%	1%	-1%	4%	0%	4%
Cool	0%	0%	0%	0%	1%	-1%	15%	28%	-13%	4%	21%	-16%	9%	7%	1%	11%	4%	6%
Slightly Cool	0%	3%	-3%	4%	2%	2%	8%	31%	-24%	4%	16%	-12%	3%	13%	-10%	16%	11%	5%
Neutral	15%	15%	0%	16%	12%	4%	4%	19%	-15%	5%	20%	-15%	16%	10%	6%	16%	14%	2%
Slightly Warm	28%	18%	10%	24%	18%	6%	4%	11%	-7%	2%	7%	-6%	29%	16%	13%	21%	23%	-2%
Warm	35%	43%	-8%	40%	29%	11%	0%	2%	-2%	0%	1%	-1%	24%	26%	-3%	11%	19%	-8%
Hot	20%	23%	-3%	16%	34%	-18%	0%	0%	0%	0%	0%	0%	12%	15%	-3%	13%	25%	-12%
Very Hot	3%	0%	3%	1%	5%	-4%	0%	0%	0%	0%	0%	0%	7%	10%	-3%	9%	4%	5%
Average Daily Attendance	10.547	26.726	39%	7.991	19.627	41%	4.952	12.378	40%	3.130	6.365	49%	9.634	25.129	38%	5.617	14.501	39%
Precipitation Days	5%	13%		10%	8%		8%	4%		8%	8%		6%	0%		7%	9%	

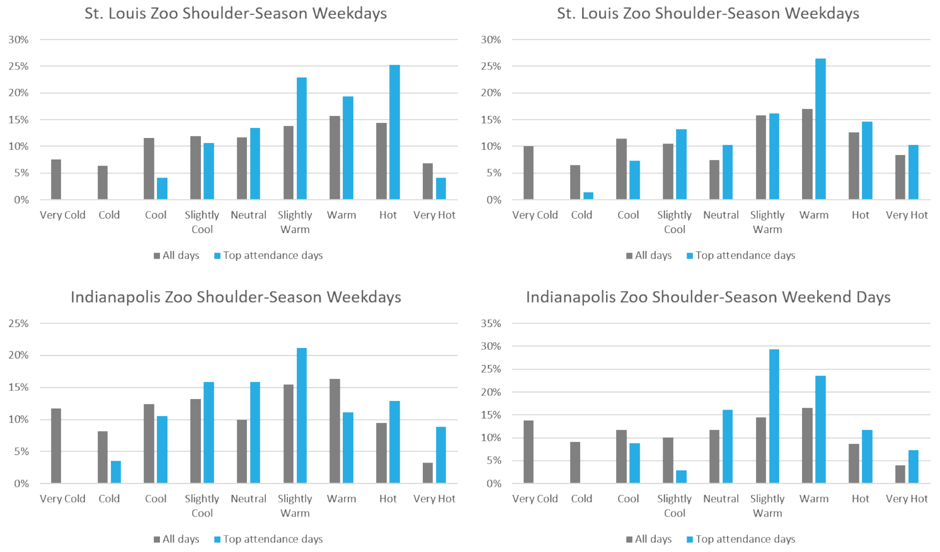

Figure 6: Comparison of shoulder-season top attendance relationships

Comparing differences across zoological parks in Table 5, the highest contrast in top attendance days occurs within the low season where a difference between zoos occurs in nearly every represented PET thermal category. This change is anomalous to other seasons and is displayed in Table 5. Within low season weekdays at the St. Louis Zoo, climatology indicates 64% of days represented as 'very cold' however, within top attendances, only 20% of days are 'very cold' (Figure 6). This result is perpetuated at this location as while 'neutral' days represent only 4% of all days, they represent 20% of top attendance days. Although this trend is present at the Indianapolis Zoo as well, within low-season weekend days, the differences are much less stark as very cold days represent 72% of climatology and 67% of top attendance days, and neutral days represent 2% of climatology and 5% of top attendance days. The same results are apparent for weekends with equivalent and drastic differences. Very cold days represent 58% of low-season weekends at the St. Louis Zoo but only 2% of the top attendance days in the same period; neutral days represent only 4% of days but 19% of top attendance days. Again, at Indianapolis Zoo, while the trends are similar, the vast differences are not present. This result indicates a sensitivity visitors in St. Louis may have with respect to cold days. Although it might make sense to be explained conversely that visitors in St. Louis may possess affinity for warmer days within the low season, this conclusion is not verified by Figure 5 and the representation of attendances across thermal categories.

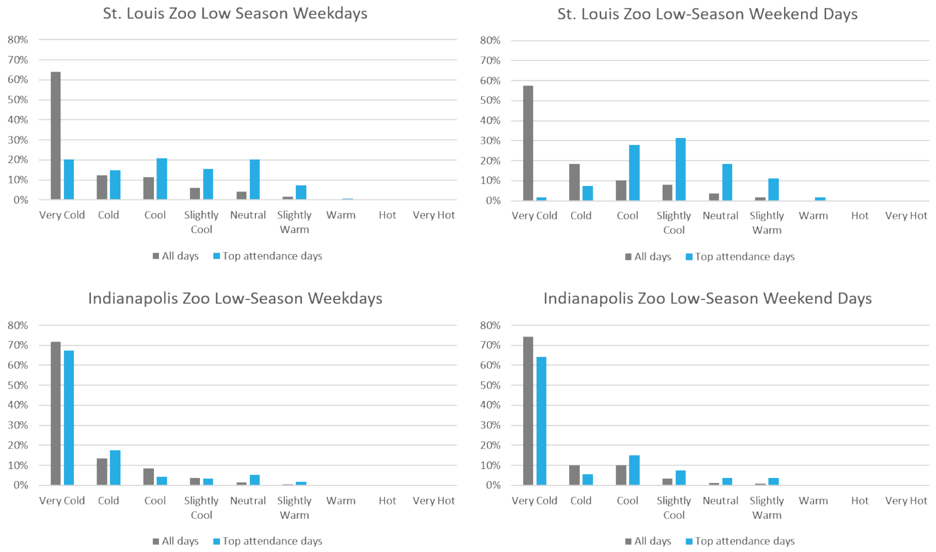

Figure 7: Comparison of low-season top attendance relationships

Conclusions and Future Direction

This paper has outlined research which addressed both long-term climate implications on tourism and the short-term impact weather has on tourism participants. This research largely began as a response to the suggestions of Nicholls *et al.* (2008), Scott and Jones (2006), Scott *et al.* (2012), and Perkins and Debbage (2016), all of whom suggested that before undertaking significant research on the implications of climate change in the tourism industry, we must first better understand how different weather and climate factors impact tourists.

Specific findings of this research provide a broader geographic context to the original work of Perkins and Debbage (2016) and help provide foundational information regarding human thermal preferences and how those preferences may vary across diverse climates within the broader tourism sector. For example, although Indianapolis and St. Louis zoological parks are within different climate zones than Phoenix and Atlanta zoos (Perkins and Debbage, 2016), it was found that top attendances at both the Indianapolis and St. Louis zoos corroborated results across climate zones and within the humid continental climate. Thermal categories ‘slightly warm’ and ‘warm’ seem to be universally preferred with only small differences between the zoos. This is a consistent finding with other literature as evidenced in Table 1. The thermal preference for ‘warm’ and ‘slightly warm’ conditions was consistent across all seasons and days of the week.

Among those thermal conditions most associated with ‘poor’ levels of attendance, this research also confirmed findings from the original Perkins and Debbage (2016) research which concluded that the most common thermal extreme condition at a location tends to be associated with the lowest visitor attendances on record, resulting in an 'extreme temperature aversion'. This phenomenon is underscored in broader literature which discusses thermal aversion (Gomez-Martin, 2005; Olya and Alipour, 2015). Additionally, Caldeira and Kastenholz (2018) establish that tourists enjoy visiting places which provide the "highest level of comfort and well-being" and "tourist activities…are significantly influenced by the weather." (P.1533). Given the humid continental climates, both Indianapolis and St. Louis zoos experienced 'very cold' conditions in greater frequency than 'very hot' days and appeared to experience 'cold aversion' on the lowest days of attendance. In addition, it was found at the St. Louis Zoo during the 'low' season with corresponding 'very cold' thermal conditions, attendances appeared to suffer more than in Indianapolis. Both zoological parks had holiday events and promotions during this time period; however, the attendances still were proportionally lower at the St. Louis Zoo. The author believes this may indicate a higher degree of cold thermal aversion at St. Louis. Given the similar climates of each zoo such aversion may be generated less by acclimatization and more by the different pricing structures between the zoos. In short, the free admission of the St. Louis Zoo might decrease personal investment in a visit and therefore depress turnouts on days of 'poor' thermal conditions. This finding should be further developed and analyzed in future research, particularly if it can be better explained by the pricing structure of admission.

Future research incorporating metropolitan zoos in more diverse climates would be excellent tests to determine if local climates continue to influence 'poor' attendance days and whether a 'universal optimal thermal condition' continues to persist regarding the highest days of attendance. Knowledge of 'thresholds' would also be beneficial for understanding 'trigger points' in the ambient thermal environment that may significantly influence attendances in a non-linear manner. Such methods as utilized by Aylen (2014) and Hewer et al. (2016) help determine climate preferences. A limitation to this research in this area is that the climates of Indianapolis and St. Louis, while similar, are not identical and patrons experience differing thermal conditions throughout the year. Though the comparison is more direct than Phoenix and Atlanta (Perkins and Debbage, 2016), this lack of complete comparability decreases the ability for assumptions to be made about 'general' zoo visitors and their like interpretations of the weather conditions. Without direct surveys of those visitors, only inferences can be made based on attendance flow patterns.

When creating a fine-tuned analysis of weather-based decision-making, future research in this field should account for the possibility that weather conditions have differing levels of impact based on demographic variables (Hewer et. al., 2018) and timing of visitor arrivals based on weekends and holidays (Aylen et al., 2014; Falk, 2015; Hewer & Gough, 2018). While the Western European standard was used to craft the thermal bands in this study, (a reasonable proxy for the typical zoo visitors of Indianapolis and St. Louis) in order to properly utilize thermal categories the categories should be calibrated using survey-based data to encompass the actual on-site culture and acclimatization preferences of the 'typical' zoo visitor. Furthermore, weather conditions that occur anomalously such as a 'warm winter day' or a 'cool summer day' are undoubtedly important to better understand tourist attendance decisions. As such, a synoptic-level weather variable such as the Spatial Synoptic Classification (SSC) (Kalkstein et al., 1996; Sheridan, 2002) might be of note for the future development of weather-attendance indices. The SSC serves as a broader weather-type classification that captures the character of a particular synoptic regime (Sheridan, 2002) and has been used in diverse research areas such as weather climate and health (Hondula, 2014) and zoological park attendances (Perkins, 2016).

Notably, inclusion of precipitation and the subsequent length and nature of such events is an important factor in analyzing tourist behavior. Precipitation can serve as an 'overriding' factor because once a certain amount of rainfall does occur, attendance levels tend to drop. Though not analyzed in-depth it was apparent in this study that top attendance days tended to experience fewer days of precipitation as a percentage. Scott et al. (2008) has incorporated this idea among others such as atmospheric aesthetics into the Climate Index for Tourism (CIT), which still serves as a baseline for a more comprehensive overview of the ambient weather condition at a tourist site (de Freitas et al., 2008). Within tourism, along with aesthetic factors, integrating elements that consider perception in thermal experience (Lenzholzer and de Vries, 2020; Cortesao and Raaphorst, 2020) have also become more prevalent in recent years.

Beyond the inclusion of additional weather variables, understanding how weather forecasts may shape attendance decisions (regardless of the actual weather conditions) is of importance. Katz and Murphy (1997) write in-depth regarding how weather and climate forecasts can shape decisions and subsequently local economies. Furthermore, additional research within the tourism sector (Wilson, 2011; Zirulia, 2015; Rutty and Andrey, 2014) shows that tourists and recreationists do utilize weather forecasts in their decision-making and are influenced by those forecasts in their participation decisions.

Upgrades to the technical methodologies of this research are necessary to fully realize the relationships between weather and attendance. Specifically, the use of sophisticated statistical modeling such as time series analysis can help with the interpretation of datasets with comparable decade-long temporality. Such advanced regression techniques have been utilized in previous research in tourism (Brida and

Pulina, 2010) such as those accounting for annual volatility using ARCH-GARCH (Jere et al., 2019; Coşkun and Özer, 2014) or others reviewing decision lags using ARDL methods (Falk and Lin, 2018). Furthermore, Paudyal et al., (2019) created a time-series model to analyze how varying aspects of weather such as temperature, humidity and rainfall impact recreationist use in the context of a humid subtropical climate by analyzing the Florida National Scenic Trail. Expanding such a study to the humid continental climate observed in Indianapolis and St. Louis would prove added context to understanding potential differences across climate zones.

Moreover, this paper suggested that admission pricing may have an impact on how people interpret and/or value the weather. It should be noted that the timing of extreme weather events, holidays (Hewer & Gough, 2016a), special zoo attractions and new exhibits (Hewer & Gough 2016c) may also influence visitor interpretation, thereby changing possible price elasticities and the relationship with admission pricing (Falk & Hagsten, 2016; Falk & Vieru, 2017; Cellini and Cuccia, 2018). To test this hypothesis in increased detail, other metropolitan zoos that offer free-admission, such as Lincoln Park Zoo in Chicago, Illinois or Como Zoo in Saint Paul, Minnesota, could be useful case-studies when studying the interface of price, attendance, and weather.

Better understanding how tourists and recreationalists behave today in response to weather will give insights into how they may also respond to a changing climate. Zoological parks can use this information to determine a variety of elements to help improve operational efficiency. For example, understanding the impact of weather can induce a better prediction of attendances, subsequently assisting in adjusting staffing levels. Understanding how price may moderate weather-induced attendance fluctuations can help zoos utilize promotions to facilitate increased attendance on 'marginal weather days.' Projecting how future climate change may impact long-term attendance levels can assist with adjusting exhibit or building design (Salata et al., 2017) in the context of thermal comfort (Santos Nouri et. al., 2018). Beyond zoological parks, this type of information—linking attendances and weather—can potentially be used by communities and businesses in other outdoor areas of the tourism sector. Such areas include sporting events, concerts, and festivals. Beyond immediate events, a better understanding of how thermal conditions impact choice and participation can integrate with longer-term planning such as in urban design characteristics to assist with better-informed policy and planning decisions.

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RESEARCH ARTICLE

Analyses of the Tourism Potentials of Dala Hill, Kano Metropolis: Protecting Heritage Properties and Promoting Sustainable Tourism

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Abstract

The relationship between human and the Built environments in its complex nature evolved series of consequences as loss of heritage properties through decay, natural hazard, human factors in the modern society. Hence, this study analyzed the heritage tourism potentials of Dala Hill, Kano Metropolis, Nigeria. Both qualitative and quantitative data was collected through detailed inventory and profiling of the site and questionnaire administration on two categories of respondents (above 60years (*Aged*) and Between 18 – 59years (*Agile*)) within 300meters vicinity to the site. Therefore, 45 (*Aged*) people were selected using snowballing sampling procedure, and 262 (*Agile*) respondents were surveyed using systematic sampling procedure. Findings revealed that Dala hill is faced with the threats of neglect, decay and deterioration induced through weathering and human activities. It has poor sanitary conditions, open defecation, waste disposal, poor accessibility, and is an abode for hoodlums. However, resident perceived the site to generate more economic (RPI = 3.38) and sociocultural (RPI = 3.27) importance, and moderate environmental (RPI = 3.18) importance in the study area if necessary, attention, restoration and transformation plan are designed and implemented.

Keywords

Dala Hill, Heritage Properties, Tourism Potentials, Tourism Sustainability, SDGs, and Conservation

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Introduction

Protecting cultural and natural heritage has significant impact on the quality of life of the people as well as enhancing the economic situation of the environment (Di-Pietro, Guglielmetti, Mattia, and Renzi, 2015). Cultural heritage is a valuable and irreplaceable body of knowledge and resources that promote economic growth, employment, and social cohesion (Vecco, 2010). The loss of heritage properties because of decay, natural hazard (earthquake and floods), human factor (theft, war, civil disorder, terrorism, neglect, and vandalism) is inevitable in the modern society (Teijgeler, 2006; Adamo, 2017, Vecco, 2017, and Vecco, 2018). Hence, This study aimed at providing information, shed light and enhances the reflection on the implication and impacts of neglect and flood weathering of heritage values of Dala Hill in line with the Sustainable Development Goals (SDGs) 8.9 and 11.4 that placed emphasizes on protection and safeguarding of heritage, and promote sustainable tourism that creates jobs and promotes local culture and products (Xiao, Mills, Guidi, Rodríguez-Gonzálvez, Barsanti, and González-Aguilera, 2018).

Development of a sustainability index of cultural heritage have been the focus of limited articles such as (Ribeiro, Lira, Piccolo, Pontual, 2012; Villase, Alonso, Magar, 2012; Mendes, Similä, 2012; and Nocca, 2017), whereas most authors placed attention on the relationship between sustainability and cultural heritage tourism (Landorf, 2009). The World Tourism Organization (WTO) have defined sustainable indicators as ‘the set of measures that provide the necessary information to better understand the links between the impact of tourism on the cultural and natural setting in which this takes place (World Tourism Organization, 1996; and Nocca, 2017). WTO created guidelines for sustainable development of cultural tourism, these guidelines was grouped into three dimensions such as social, economic, and environmental (World Tourism Organization, 1996). Considering these dimensions, the potential of the subject matter “Dala Hill” is holistically examined. The present study aimed to explore the implications and effects of neglect on cultural heritage property “Dala Hill” in Kano metropolis, Nigeria, focusing on the targets of sustainable development goals (SDGs) 11 which states that cities should become ‘inclusive, safe, resilient and sustainable’, through ‘inclusive and sustainable urbanization, planning and management’ (Target 11.3) and efforts to protect and safeguard the world’s Cultural and natural heritage’ (Target 11.4). This target is to protect and safeguard cultural heritage.

Theoretical Underpinning: Conservation theory (CT) and Dala Hill

Considering the theme of the study, conservation theory was found important in explaining the subject matter. Conservation Theory is a socially constructed activity that interacts with and is governed by economic, political, spiritual, religious, social, and cultural dynamics in preserving the subject matter. This theory explains the changes in transformation process, from the materials of heritage objects to the values that cultural heritage holds for people through the three principles of materials-based, values-based, and peoples-based; taking cognizance of the external influences (social, political, technical, and economic). The theory turned away from the usual practice of preserving heritage, to a mechanism for the creation and re-creation of culture (Sully, 2013; Sully 2007). Going by the principles, materials-based principles explained the minimum treatment required to stabilize the subject matter, for instance, Dala hill as a heritage property is gradually deteriorating and weathering away through weather and climate action. This required social, political, technical, and economic intervention to aid its stability and restoration. The intervention should also be minimal to maintain, retain, and enhance the cultural significance of the hill. Lastly, this theory placed emphasis on the members of the host communities, in this regard the aspiration of the people residing in the community housing the subject matter were considered in the restoration process.

Dala Hill: The History / Myth, and State of Art

History and Myth

The Hausa Kingdom of Kano was based on an ancient settlement of Dala Hill surround by *Dogon Nama, Bakin Ruwa, Adakawa, Yalwa, Kantudu, Kabuwaya, Gwammaja and Madigawa among other settlements*. The residual hill is 534 meters (1,753 feet) high with a circumference of 788 meters, covering a land mass of 289,892 meters (Iliffe, 2007) as shown in Figure 1. There are steps on the hill which has 999 footsteps that aids ascending to the hill top (Adebayo, 2015). The site was the major source of iron ore, thus attracting skilled craftsmen to mine, smelt and forge iron as a basic economic and social activities to aid development during the seventh century (Nast, 2005). Mythically Dala hill served as abode for the deity of *Tsumburbura* and her priest *Barbushe*, who protected the people around the hill from their enemies.

The State of the Art

Dala hill, is a significant landmark and heritage tourism property in Kano, Nigeria. Despite its historical evolution and importance, it is in a state of fiascoes, facing both natural and human induced threats. Over the years, the hill has been affected by weathering (see figure 1 and 2), a situation that strengthen erosion to gradually wash away parts of the hill, reducing the surface area and creation of gullies around the hill. On the other hand, the hill has suffered serious encroachment from the locals in numerous ways, which includes the building of houses, dumping of refuse, open defecation on and around the hill, lack of management and maintenance leading to dilapidation of stairs, and the fence (see figure 1). Presently, the site serves as a desolate center that attracts out of school children, hoodlums, and criminals for moral and immoral activities; instead of its normal attraction components that generate economic activities in the locality.

Figure 1. Dala Hill in its Present State

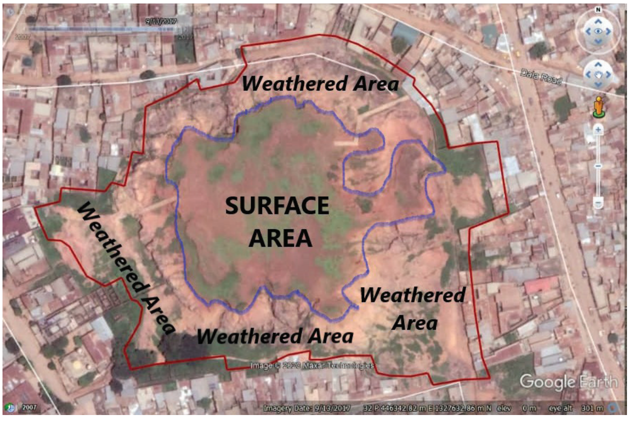

Figure 2. Aerial view of the subject matter and its environs

Research Methods

The prospect and retrospective study is based on qualitative and quantitative research design. Considering the theoretical underpinning (Conservation theory), qualitative data was collected under the three principles of materials, values, and people, taking cognizance of the external influences such as economic, sociocultural, and environmental attributes. The survey period for data collection covers 3 months period from April to June 2021. Qualitative data was collected to valuate materials and values through detailed inventory of the site; the site was profiled by the authors during the survey period, global positioning system (GPS) was us to obtain the coordinates around the perimeter of the hill, delineating the boundaries, estimating the weathered areas, and determining the existing surface area. Direct observation was used in documenting the site in terms of pollution, (indiscriminate waste disposal, open defecation among others on the site); and profile the site's potential to accommodate hoodlums and criminal. Quantitative data was collected in the form of perceptual data from two categories of residents (The Elderly and Agile) within 300meters vicinity to the site, this is because the resident within this radius would feel the impacts more than residents at a further distance (Dada, Odufuwa, Badiora, Agbabiaka, Ogunseye, & Samuel, 2020).

This study targeted two categories of respondents (above 60years (*Elderly*) and Between 18 – 59years (*Agile*) and excluded residents below 18years (*Minor*) from the study. Due to the need to survey respondents who have deep knowledge and understanding about the happenings within and around the hill and importance of the hill. Therefore, forty-five elderly people were selected using snowballing sampling procedure, in this case the first respondent was contacted in the building adjacent to the site, in which forms the basis of referrer to subsequent respondents. Preliminary investigation revealed that there are 2620 buildings within the designated radius. Using systematic sampling, one of every tenth (10^{th}) residential buildings were selected where any resident within the age categorization was selected. A total of 262 residents were surveyed. Data collected provided information on values and people's expectation and desire about the restoration of the past glory of Dala hill and to promote its potentials. Data collected was analyzed using pictorial analysis and Resident Perception Index (RPI) to rate the potential importance of the site.

Analytical Methods

A detailed inventory on the state of art of Dala hill were collected and documented. The perceptual data collected from residents was analyzed using the mean index. The residents were provided with a list of attributes (Economic, Sociocultural, and Environmental), identified in the literature, to measure their perception about the importance of Dala hill. The res pondents were instructed to score using a Likert scale rating (5= strongly agree, 4= agree, 3= Neutral, 2= disagree and 1= strongly disagree) their level of agreement with each attribute. To compute the *Resident Perception Index (RPI)*. The process is as follow:

(i). A weight value of 5,4,3,2 and 1 was attached respectively to each rating of strongly agree, agree, moderately agree, disagree, and strongly disagree.

(ii). Summation of the weight value (SWV) was computed. It is the addition of the product of the value attached to a rating and the respective number of residents to the rating.

(iii). The SWV was divided by the number of residents

This SWV is expressed mathematically as

$$\text{SWV} = \sum_{i=1}^{5} X_i Y_i \ \ldots \text{(i)}$$

Where:

SWV = summation of weight value;
X_i = number of residents to rating i;
Y_i = the weight assigned a value (i = 1, 2, 3, 4, 5).

The **SWV,** divided by the number of residents' gives the *Resident Perception Index (RPI)*. It is expressed mathematically as:

$$\text{RPI} = \frac{SWV}{\sum_{i=1}^{5} i = X_i} \ \ldots\text{. (ii)}$$

Where *RPI* is the *Resident Perception Index*, SWV and *Pi* are defined previously. The closer the *RPI* of a particular indicator to 5 the higher is assured of the importance attached to such indicator. Computation of *Resident Perception Index (RPI)* on importance of Dala Hill in Kano Metropolis as presented in Table 1

Column 1: Attributes (indicators)

Column 2: Number of individual respondents rating each of the indicators with 5 (Strongly agree)

Column 3: Number of individual respondents rating each of the indicators with 4 (Agree)

Column 4: Number of individual respondents rating each of the indicators with 3 (Undecided)

Column 5: Number of individual respondents rating each of the Indicators with 2 (Disagree)

Column 6: Number of individual respondents rating each of the Indicators with 1 (Strongly disagree)

Column 7: Addition of product of individual respondents rating a particular indicator and their respective weight values. For instance, SWV for **"Increase shopping opportunities"** = (282×5) + (161×4) + (21×3) + (10x2) + (9x1) = 2146.

Column 8: *Resident Perception Index (RPI)* equals to the summation of weight value (SWV) divided by additional of individual respondents rating each indicator. For instance, *RPI* for **"Increase shopping opportunities"** = 1077/(9+10+21+161+282) $= \frac{1077}{243} = 3.12$

Column 9: Ranking of the indicators according to their rating.

Findings and Result

Going by the principle of the theoretical footings the result was presented in accordance with the three principles of materials, value, and people's perception. In order achieve the materials and value-based principles, the study undertook detailed profiling of the various elements within and adjoining to arrive at the existing situation of the site in terms of extent, height and size, and furtherance compute the resident perception of the importance associated to the subject site, presented as follows:

Resident Perception of the Importance of Dala Hill

Economic Importance

The study revealed that the residents has positive perception of 14 out of the 21 economic attributes and were ranked accordingly, they perceived that the potentials of the site include: Increase shopping opportunities (RPI = 4.43), Improves investment spending (RPI = 4.16), Improves means livelihood (RPI = 4.11), Increase employment opportunities (RPI = 4.08), Improves local economy (PRI = 4.14), Long term promotional benefit (PRI = 3.90), Improves quality of life (RPI = 3.90), Aid basic infrastructures rehabilitation (RPI = 3.87), Increase in the price of land and housing (RPI = 3.85), Increase in property taxes (RPI = 3.76), Increase in average spending (RPI = 3.72), Provides communal funding (RPI = 3.76), Interruption of normal business (RPI = 3.65), Earn foreign exchange (RPI = 3.59), from 1st to 14th respectively. On the contrary, the residents believe that the potentials of the site would not Increase in cost of transportation, Leads to extraneous dependency, Increase in cost of living, Result in high leakage effect, Underutilized infrastructure, Inflation of goods and services, and Create scarcity of goods and services. The implication of the findings is that the economic benefits of the site as perceived by the residents will improve the standard of living of the people, elevate local economy and promote Small and medium scale enterprise (SME) among the locals (See Table 1).

Table 1
Economic Importance

ATTRIBUTES	SD 1	D 2	UD 3	A 4	SA 5	SWV	RPI	DEV.	R
Increase shopping opportunities	5	5	11	81	141	1077	4.43	1.06	1st
Improves investment spending	11	8	22	76	107	932	4.16	0.79	2nd
Improves local economy	15	17	8	66	119	932	4.14	0.77	5th
Improves means livelihood	12	23	11	61	117	920	4.11	0.74	3rd
Increase employment opportunities	9	20	21	68	107	919	4.08	0.71	4th
Long term promotional benefit	17	32	11	60	104	874	3.90	0.53	6th
Improves quality of life	10	28	26	70	89	869	3.90	0.53	7th
Aid infrastructures rehabilitation	11	31	22	74	87	870	3.87	0.50	8th
Increase price of land and housing	12	27	16	96	73	863	3.85	0.48	9th
Increase in property taxes	11	37	20	82	74	843	3.76	0.39	10th
Provides communal funding	18	26	23	78	76	831	3.76	0.39	12th
Increase in average spending	11	32	25	96	60	834	3.72	0.35	11th
Interruption of normal business	31	7	29	100	57	817	3.65	0.28	13th
Earn foreign exchange	17	39	20	89	58	801	3.59	0.22	14th
Leads to extraneous dependency	54	99	21	34	16	531	2.37	-1.00	16th
Increase in cost of living	51	109	16	26	22	531	2.37	-1.00	17th
Increase in cost of transportation	43	118	18	26	18	527	2.36	-1.01	15th
Result in high leakage effect	58	95	28	25	19	527	2.34	-1.03	18th
Underutilized infrastructure	55	106	26	26	11	504	2.25	-1.12	19th
Inflation of goods and services	56	92	58	8	10	496	2.21	-1.16	20th
Create scarcity of goods and services	107	60	14	23	16	441	2.00	-1.37	21st
TOTAL	**614**	**1011**	**446**	**1265**	**1381**	**15939**	**70.85**	**RPI = 3.37**	

Source: Author's computation 2021

Sociocultural Importance

The study revealed that the residents has positive perception of 16 out of the 27 Sociocultural importance attributes and were ranked accordingly, they perceived that the potentials of the site include: Foster support for festival celebration (RPI = 4.52), Showcase local culture (RPI = 4.42), Protection of local cultural identity (RPI = 4.34), Aid preservation of heritage properties (RPI = 4.28), Create entertainment and social support (RPI = 4.23), Create opportunities for shopping (RPI = 4.07), Create a sense of value and identity (RPI = 4.18), Increase interaction with locals (RPI = 4.12), Satisfying leisure needs (RPI = 4.11), Revitalization of arts (RPI = 4.05), Diversify community economic activities (RPI = 4.03), Exchange of experiences and information (RPI = 4.00), Create safer community (RPI = 3.95), Commercialized local tradition (RPI = 3.90), Fosters exchange of culture (RPI = 3.83), and Change in community social structure (RPI = 3.74), from 1st to 16th respectively. On the contrary, the residents believe that the potentials of the site would not increase prostitution, Lead to vandalism, Intensified pressure between locals and tourists, Change value system, Disrupt local activities, Create negative influence on the locals, Increase alcoholism, drug trafficking, and crime, Generate xenophobia, and lastly would not lead to Property damage (See Table 2).

Table 2
Sociocultural Importance

ATTRIBUTES	SD 1	D 2	UD 3	A 4	SA 5	SWV	RPI	DEV	R
Foster support for festival celebration	7	5	8	49	156	1017	4.52	1.25	1st
Showcase local culture	8	11	7	51	147	990	4.42	1.15	2nd
Protection of local cultural identity	5	6	8	94	111	972	4.34	1.07	3rd
Aid preservation of heritage properties	6	16	5	80	117	958	4.28	1.01	4th
Create entertainment and social support	6	13	12	86	107	947	4.23	0.96	5th
Create a sense of value and identity	14	8	11	81	109	932	4.18	0.91	7th
Increase interaction with locals	10	22	10	72	111	927	4.12	0.85	8th
Satisfying leisure needs	18	15	11	61	120	925	4.11	0.84	9th
Create opportunities for shopping	14	16	9	91	100	937	4.07	0.80	6th
Revitalization of arts	10	20	26	60	108	908	4.05	0.78	10th
Diversify community economic activities	19	10	13	87	96	906	4.03	0.76	11th
Exchange of experiences and information	17	24	9	67	107	895	4.00	0.73	12th
Create safer community	11	17	25	92	80	888	3.95	0.68	13th
Commercialized local tradition	16	19	17	92	80	873	3.90	0.63	14th
Fosters exchange of culture	17	27	14	86	80	857	3.83	0.56	15th
Change in community social structure	21	32	10	80	80	835	3.74	0.47	16th
Create an increased in prostitution	56	100	26	15	28	534	2.37	-0.90	17th
Vandalism	65	100	10	27	22	513	2.29	-0.98	18th
Intensified pressure between participants	89	57	26	30	22	511	2.28	-0.99	19th
Change in value system	58	99	31	21	15	508	2.27	-1.00	20th
Disruption of local activities	77	96	14	22	15	474	2.12	-1.15	21st
Negative influence on the locals	92	90	9	19	14	445	1.99	-1.28	22nd
Increased alcoholism	102	78	11	17	16	439	1.96	-1.31	23rd
Increase drug trafficking	100	70	31	14	9	434	1.94	-1.33	24th
Increased crime	96	90	26	7	5	407	1.82	-1.45	25th
Generate xenophobia	108	84	9	13	9	400	1.79	-1.48	26th
Property damaged	106	89	9	12	8	399	1.78	-1.49	27th
TOTAL	**1148**	**1214**	**397**	**1426**	**1872**	**19831**	**88.36**	**RPI=3.27**	

Source: Author's computation 2021

Environmental Importance

The findings from table 3 reveals that 9 out of the 18 environmental importance attributes are identified to be positive by the respondents, ranked from most agreed statements to least agreed statements, The table shows that the residents rates Conservation and restoration of heritage sites as the top most environmental importance of the Hill with RPI rating of 4.38, followed Increase considerable investment in infrastructure with RPI rating of 4.27, Creation of scenic beauty in the environment with RPI rating of 4.18, Creation of awareness on the need to protect the resources with RPI rating of 4.17,Improves park and recreation areas, RPI rating 4.13, Stimulate planning to improve amenities and business RPI rating 4.10, Potential aid in spread of tourism benefits RPI rating 4.07, Improvement in transport infrastructure RPI rating 4.03, Attract intervention protect natural environment RPI rating of 3.96 The residents also disagree with the fact that Dala hill Lead to overcrowding with RPI rating of 2.63, Causes an increases in noise pollution RPI rating of 2.50, create Traffic congestion RPI rating 2.42, Overstretch of resources RPI rating 2.38, leads to

Loss of vegetation RPI rating 2.02, Create visual pollution RPI rating 1.98, Increase street littering RPI rating 1.93, causes Desert encroachments RPI rating 1.89 And the respondents rates the statement Causes an increase in air pollution with the lowest RPI rating of 1.85. This proves that the hill will bring more environmental benefit than harm to the study area (See Table 3).

Table 3
Environmental Importance

ATTRIBUTES	SD 1	D 2	UD 3	A 4	SA 5	SWV	RPI	DEV	R
Conservation of heritage sites	2	5	8	99	109	977	4.38	1.22	1st
Increase investment in infrastructure	5	11	9	92	107	957	4.27	1.11	2nd
Creation of scenic beauty	9	21	8	70	117	940	4.18	1.02	3rd
Creation of awareness on the need to protect the resources	6	10	26	80	102	934	4.17	1.01	4th
Improves park and recreation	12	16	10	80	106	924	4.13	0.97	5th
Stimulate planning to improve amenities	8	12	26	83	96	922	4.10	0.94	6th
Aid in spread of tourism	11	8	25	90	90	912	4.07	0.91	7th
Improve transport infrastructure	17	19	10	73	106	907	4.03	0.87	8th
Attract intervention protect	20	22	13	62	108	891	3.96	0.80	9th
Lead to overcrowding	51	75	24	41	28	577	2.63	-0.53	10th
Causes noise pollution	56	86	19	37	25	558	2.50	-0.66	11th
Traffic congestion	59	90	20	31	24	543	2.42	-0.74	12th
Overstretch of resources	56	101	16	31	21	535	2.38	-0.78	13th
Loss of vegetation	80	96	24	15	10	454	2.02	-1.14	14
Create visual pollution	101	67	29	14	13	443	1.98	-1.18	15th
Increase street littering	77	87	24	10	6	393	1.93	-1.23	16th
Desert encroachments	92	90	26	10	7	425	1.89	-1.27	17th
Causes pollution	96	87	24	10	6	412	1.85	-1.31	18th
TOTAL	758	903	341	928	1081	12704	56.88	**RPI= 3.16**	

Source: Author's computation 2021

The importance of Dala hill was established using indicators that were categorized into economic, sociocultural, and environmental dimensions. For this study, the rating scale is on a 5-point Likert's scale, therefore. The result of the computation of RPI for economic dimension is 3.38, sociocultural is 3.27, and environmental is 3.65. Consequently, we can say that the economic dimension accounted for the highest importance associated with Dala Hill, while that of sociocultural has moderate importance, and environmental dimensions has Low importance in the study area. Invariably, the combined index for the three dimensions is 3.28, meaning that the overall importance associated with Dala hill moderate (See Figure 3).

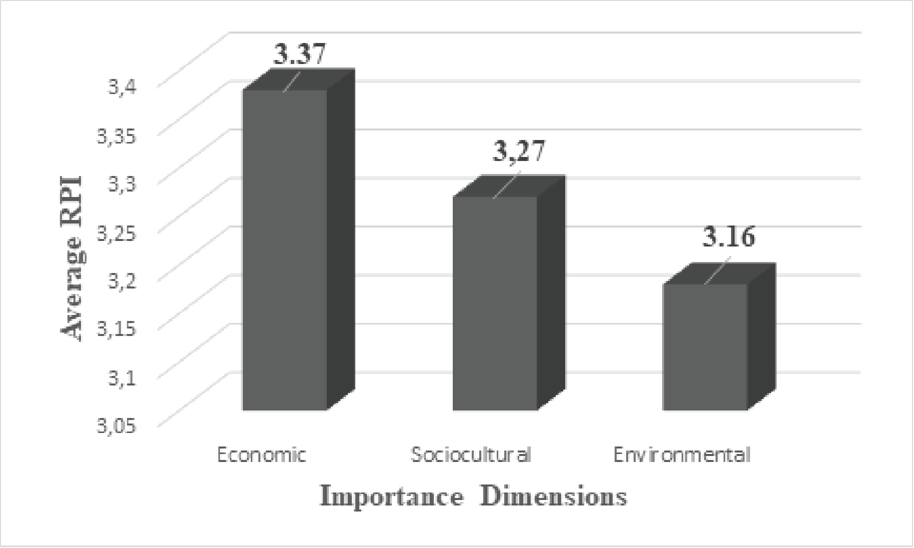

Figure 3. Combine Importance Associated with Dala

Conclusion and Recommendation

The study examined the tourism potential of Dala hill within the ancient Kano city. It identified complementary tourism potentials within the city wall and vicinity to Dala hill to include: thirteen (13) ancient city gates, Emir's Palace (Gidan Murufa), Historical Museum (Gidan makama), Kofar mata dying pits, Relics of ancient Kano walls, and ancient African famous market (Kurmi market). These are heritage properties surrounding the subject matter of the present study, which are worthy to review, as they form parts of external attraction components to the area. The site's major attraction component is its historical evolution. Despite the historical evolution attached to the hill, it has faced threat of decay and deterioration induced through weathering and human activities. Presently, the site is characterized with poor sanitary condition, open defecation, waste disposal, poor accessibility, and abode for hoodlums.

The residents presented the potentials of the site from three perspective. From the economic point of view, the respondents affirms that Dala hill has the potentials to *Increase shopping opportunities, investment spending, means livelihood, employment opportunities, local economy, quality of life, price of land and housing, property taxes, average spending, communal funding, Interruption of normal business, Aid basic infrastructures rehabilitation and Earn foreign exchange,* among others. From sociocultural perspective, the site has the capacity to *Foster support for festival celebration, Create a sense of value and identity, Showcase local culture, Protect of* *local cultural identity, Aid documentation and preservation of heritage properties, Create entertainment and social support, Create a sense of value and identity, Increase interaction with locals. Satisfying leisure needs, Revitalization of arts, Exchange of experiences and information, Create safer community, Commercialized local tradition, and Fosters exchange of culture*. The last perception of the resident is from environmental view point, which affirm that the has the potentials to *Conservation and restoration of heritage sites, Increase considerable investment in infrastructure, Creation of scenic beauty in the environment, Creation of awareness on the need to protect the resources, Improves park and recreation, Attract intervention protect, and Stimulate planning to improve amenities,* among others.

The implication of the study is that Dala Hill has enormous potentials that is beneficial to the visitors, members of the host communities, and the government as a tourism site Kano. Hence, the need for good planning and landscape design. In line with the findings, the following recommendations can be made:

- Stakeholders should encourage the preservation of historic structures by providing necessary support, For instance, the government should create enabling environment for National Commission for Museums and Monuments in Nigeria (NCMM) to remove barriers and encourage private sector and community members to contribute to conserving heritage properties.

- The Kano Emirate should engage with international bodies like United Nations on Educational Scientific and Cultural Organization (UNESCO) to promote the site to a world class standard. By attracting external aid in rehabilitating the heritage site to evolve its potentials and attraction components.

- The concept of co-creation should be promoted through cooperate social responsibility and community participation by private sector and the locals to contribute their quota in protecting heritage properties

- Adequate publicity on the potentials, attraction components, and significance of cultural heritage in local and international media.

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The Need for Greater Diversification of Tourism Products in the Samarkand Region of Uzbekistan

Shukhrat Rakhmonov[1], Ian Patterson[2]

Abstract

Before the Covid pandemic, Samarkand, Uzbekistan was seen as an emerging, exotic tourist destination. This is because of the growing interest in its historical importance and cultural history which was strongly linked with the Great Silk Road. This region was included in a list of UNESCO World Heritage Sites under the name of "Samarkand-Crossroads of Cultures", and was attracting more foreign tourists each year because of its rich history, magnificent architecture, authentic culture and Islamic buildings. However, with the advent of the Covid pandemic, the tourism industry collapsed because its borders were closed to international tourists for a large part of 2020. Only recently, new measures have been implemented to attract international tourists and to make the Samarkand region the tourism hub of Uzbekistan once again. This study used a qualitative research design that involved interviewing 10 tourist operators to determine their opinions about the need for greater diversification of new tourism destinations, assessing their potential and determining the need for the further expansion of tourism development. As a result, several new niche tourism markets were identified that should be developed in order to appeal to different special interest segments of international and domestic tourists.

Keywords

tourism potential, tourist destination, tourism product diversification, niche tourism, special interest tourists; Samarkand Uzbekistan

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Introduction

Tourism is one of the most significant sectors of the world and has been growing rapidly, with the total number of international tourist arrivals reaching 1.4 billion in 2018, which was a 5% increase compared with 2017 (United Nations World Tourism Organization, 2019), and made up 10.4% of global GDP in 2018 (World Travel and Tourism Council, 2019). However, in February, 2020 the Covid-19 virus first appeared in Wuhan, China. After its emergence, the global situation changed as it negatively influenced all the international collaborations and relationships between countries. Tourism was one of the industries that suffered the most from the coronavirus pandemic, losing $2.1 trillion and over 100 million jobs in the sector (World Travel and Tourism Council, 2020). The recovery and support for the tourism and hospitality industry after the pandemic has become a pivotal issue around the world, as many hot-spot destinations have suffered great financial losses.

Uzbekistan is best known for its historical and cultural attractions (Gonzalez, Rio, & Kim, 2016) of which 140 have been included in the UNESCO World Heritage List (Baxtishodovich, Suyunovich, & Kholiqulov, 2017). Its central location is on the Great Silk Road, which was a system of caravan routes established in ancient times connecting Asia with the Mediterranean and European worlds. Lonely Planet (n/d) writes: “The region’s cradle of culture for more than two millennia, Uzbekistan is the proud home to a spellbinding arsenal of architecture and ancient cities, all deeply infused with the bloody, fascinating history of the Silk Road. In terms of sights alone, Uzbekistan is Central Asia’s biggest draw and most impressive showstopper” (https://www.lonelyplanet.com/uzbekistan).

In Uzbekistan, the tourism market has become a major focus of the government since the country declared its independence from the Soviet Union in 1991 and became a republic. They adopted numerous decrees and laws that supported the development of the Uzbek tourism industry. The first was the creation of the national tourism company “Uzbektourism” by presidential decree in 1992 (Tuxliev, Hayitboyev, Safarov, et al. 2014). In 2016 the State Committee for Tourism Development was established by presidential decree. In 2017 another presidential decree supported the accelerated development of the tourism industry, to increase its role and share in the economy, its diversification and to improve the quality of tourist services and to expand tourism infrastructure. As a result, the numbers of foreign visitors increased substantially from 173,000 in 1996 ($15 million, 0.11% of GNP), to 5.35 million visitors in 2018 ($1.31 billion, 2.6% of GDP) (worlddata.info, 2018). Tourists stated that they were mainly attracted by the many unique architectural mausoleums, minarets and mosques in the ancient cities of Samarkand, Bukhara and Khiva; and chose a guided tour provided by local travel agencies (Ministry of Foreign Affairs, Uzbekistan, 2020).

Although the numbers of international visitors have been gradually increasing, Uzbekistan is still regarded as a historical and cultural tourism destination, and is only visited for a short period of time. Tourism data collected in 2018-19 by the government shows that the majority of foreign tourists who arrived in Uzbekistan generally only undertook one standardized cultural tour program and stayed for a brief amount of time (average duration of stay was 6.9 days) (Tourism, Uzbekistan, 2018). Based on these findings, Kapiki and Tarikulov (2014) suggested that Uzbekistan needed to better utilize its tourism resources, as this has slowed down the process of more rapid development. Kapiki et al. (2014) warned that this should be a major concern for tourism providers as, "…there is no guarantee that this small tourism flow arriving in Uzbekistan will not exhaust itself in some time".

This lack of diversification of its tourism products is based on the fact that its tour operators and tourism agencies have been offering the same or similar cultural and historical tourism tours and products to international visitors for the past 30 years. All these tourism products have been contained within the historical and well-known cities of Uzbekistan - Samarkand, Bukhara, Khiva and Shakhrisabz. However, there are many other potential perspectives and tourism opportunities in other cities and regions of Uzbekistan that need to be developed, and will be further explored in this study.

Literature Review

Diversification of Tourism Products

The tourism industry has changed considerably over the last few decades, mainly because of the rapid developments in information technology, modernization of services, changes in tourist behavior and the emergence of new tourism destinations. This has resulted in tourism operators creating a variety of diverse tourism products and services to successfully run their businesses, and not lose their position in the international tourism market. Halavach and Rubakhau (2014) defined diversification as "A growth of the variety of products and services, a transition for new tourism products, an introduction of the new technologies and access to new markets to improve performance or reduce bankruptcy risk" (p. 26). Romão, Guerreiro, and Rodrigues (2017) stated that diversification strategies assist in protecting natural resources, which supports sustainable tourism development and boosts the link between tourism and other regional industrial sectors.

Weidenfeld (2018) examined the diversification of tourism at the product/market, regional and sectoral levels and stated that the product/market levels refer to all geographical levels from the individual firm to the international level. Benur and Bramwell (2015) indicated that primary tourism products are essential and their diversification can be crucial for competitiveness and the sustainable development of destinations. Destinations need to understand the significance of providing diversified tourism products as this can diminish the risk and provide considerable benefits (Weaver & Lawton, 2006). Rotich and Kogola (2012) stated that diversification provides the sector with a broader stage that strengthens niche tourism types and hospitality activities. Additionally, Moraru (2011) believed that diversification has a positive effect on the competitive spirit of the tourism market and that internal competition between different tourism stakeholders may improve the quality and performance of services. Moreover, tourism product diversification may assist destinations to develop synergies and partnership links between tourism products that can help in improving destination flexibility and competitiveness (Benur, 2013).

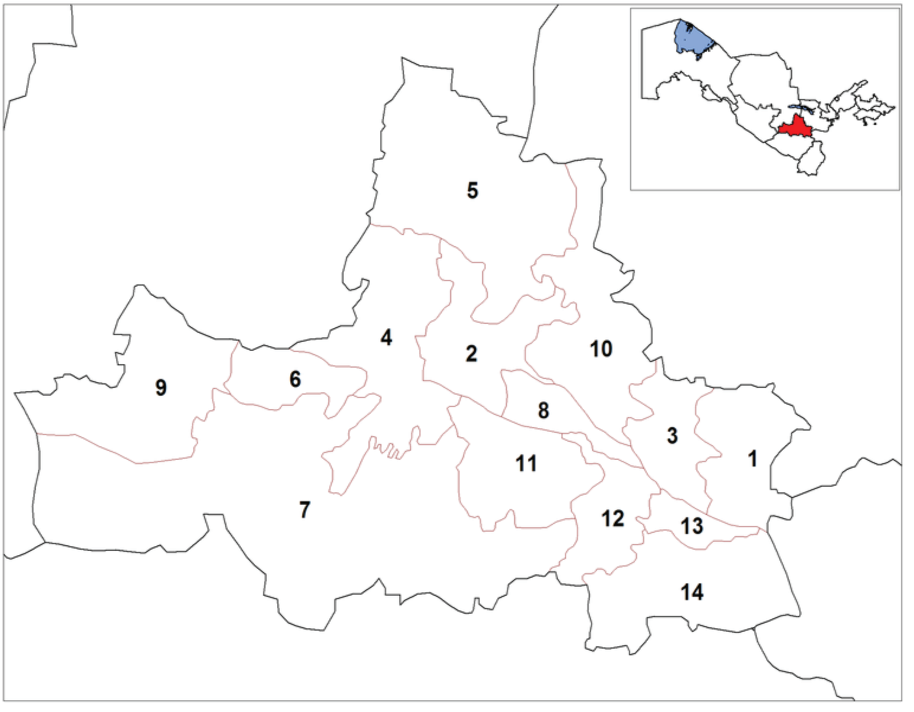
Tourist Destinations

According to Dickman (1999) a tourist destination refers to the five "A" components, which stand for, "attractions, access, accommodation, amenities, and activities". Morachat (2003) stated that a tourist destination must have all of these elements to some degree although they need not be equally balanced or of the same quality and consistency for each potential destination. According to Popichit, Anuwichanont, Chuanchom, *et al.* (2013) the assessment of the destination's potential helps to indicate and rate the importance of existing destination resources in each region or province. Each tourist destination must have its own unique tourism resources and attractions to appeal to tourists and to develop the tourism industry.

Tourist attractions can also play a vital role in the development of tourism in the regions. Harris and Howard (1996) defined a tourist attraction as a physical or cultural feature of a particular area that individual travelers or tourists perceive as capable of meeting one or more of their specific leisure-related needs. These features might be ambient in nature, such as climate, culture, vegetation or scenery, or they may be specific to a location such as a theater performance, a museum or a visit to a waterfall.

Samarkand Region

The Samarkand region is one of the well-known regions of Uzbekistan with its rich tourist potential, extensive history and cultural significance. The region is located in the center of the Republic of Uzbekistan in the Zarafshan valley. It is bordered by the Jizzakh region in the north-east, the Republic of Tajikistan in the east, the Kashkadarya region in the south and the Navoiy region in the west and north-west. The total area of the region is 16.77 square kilometers with a population of 3,813,600 people (in 2019). The region consists of four cities (Samarkand, Urgut, Aktash and Kattakurgan) and 14 districts (see Figure 1).



1. Bulungur 2. Ishtikhan 3. Djambay 4. Kattakurgan 5. Kushrabat 6. Narpay 7. Nurabad 8. Akdarya 9. Pakhtachi 10. Payarik 11. Pastdargam 12. Samarkand 13. Taylak 14. Urgut

Figure 1. Administrative-territorial division of the Samarkand region

In the Samarkand region there are 1,105 archeological, 670 architectural, 37 historical attractions, 18 monumental, and 21 memorial zones, totalling 1,851 tangible-cultural heritage objects (Gaibnazarova, 2018). Researchers have supported the need for greater diversification, "The Samarkand region is rich in tourism resources to develop cultural, sport, adventure, educational and eco-tourism" (Aslanova, Sattarova, & Alimova, 2016).

Niche or Special Interest Tourism

With the growing maturity of the global tourism market, a new trend has emerged, which is moving away from what has been termed 'mass tourism' or the more traditional forms of tourism development, now termed 'overtourism'. These new markets are referred to as 'special interest' or 'niche tourism', which refers to the desire for travellers to seek out new and exotic tourism markets, especially the more experienced and highly engaged consumers. Wearing (2002) stated that the tourist in the 21st century is "searching for new and exciting forms of travel in defiance of a mass-produced product" (p. 243).

According to the World Tourism Organization, special interest tourism is defined as specialized tourism that involves individuals or groups of tourists who wish to develop their given interests, or to visit sites and places that have a strong connection with their specific interest or subject. Kruja and Gjyrezi (2011) stated that special interest tourism includes various travel activities and has become known as a niche market. This style of tourism has become more sustainable and participants of the special tourism market enjoy contact with nature, observing the flora and fauna of the destinations, exploring, discovering and overcoming obstacles and feeling the pleasure of overcoming them. The most common types of niche tourism markets are cultural and heritage tourism, gastronomy and wine tourism, adventure and nature-based tourism, sport tourism, religious tourism, rural tourism and medical tourism (Novelli, 2005).

Cultural and Heritage Tourism

According to the United Nations World Tourism Organization, cultural tourism is a type of tourism in which a traveler's main aim is to learn, discover, experience and consume tangible and intangible resources of the particular destination (UNWTO, n.d.). ECTARC (1989) stated that cultural tourism resources can involve archaeological places and museums, architecture (ruins, famous buildings, whole towns), art, sculpture, crafts, galleries, festivals, events, music and dance (classical, folk, contemporary), drama (theatre, films, dramatists), language and literature study, tours, events, religious festivals, pilgrimages, complete (folk or primitive) cultures and sub-cultures.

Cultural and heritage tourism is well developed in the Samarkand city center. The main and most well-known cultural and heritage tourism landmarks of the city are at Registan Square: the Amir Timur, Rukhabad, and Aksaray Mausoleums; the Bibikhonim and Khazrati Khizr mosques, the Mirzo Ulugbek Observatory and Museum, the Afrasiab Museum: State Museum of Culture History of Uzbekistan, the El-Merosi theater for historical costume, the Konigil ancient paper factory, the Chorsu Art Gallery, and the Samarkand Handicrafts Center are always crowded with foreign visitors in tourist seasons.

Gastronomy Tourism

According to The Committee on Tourism and Competitiveness (CTC) of UNWTO, gastronomy tourism is defined as a type of tourism activity that is characterized by tourists who experience food and related products and activities while travelling (CTC, Gastronomy and Wine Tourism, n/d). UNWTO reported that gastronomic activities include cookery workshops, visiting museums, food events, food fairs, visits to markets and food producers, food tours and other food related activities

(UNWTO, 2012). The term gastronomy tourism is now more commonly used rather than culinary tourism, tasting tourism or food tourism.

Gastronomy tourism in Samarkand is regarded as a new form of special interest tourism which the government has been paying close attention to over the past few years. Recently, a gastronomic area has been established in Orzu Mahmudov Street, where tourists are able to taste various kinds of food and drinks at the following restaurants - Brighton, Qanotcha, Lagman House, Evos, and Chopar Pizzeria. It will also organize gastronomic and food festivals in future years. The main food that attracts gastro tourists to Samarkand is plov (or pilaf) (consisting of lamb meat, carrot, and rice) and bean soup which have a long history and special preparation recipes.

Wine Tourism

Wine tourism is defined as the visitation to vineyards, wineries, wine festivals and wine shows for which grape wine tasting and/or experiencing the attributes of a grape wine region are the main motivating factors for wine tourism consumers (Hall & Sharples, 2000). The main goal of tourists is to visit vineyards, wineries, to taste, consume and purchase wine which is usually near to the source (CTC of UNWTO, n.d.). According to Carmichael (2005), wine tourism refers to activities motivated by a tourist's desire to taste new wines and learn about the traditions and culture of wine-producing areas. Wine tourism products comprise bundles of activities, services and benefits that constitute experiences that require cooperation between tourism and agriculture to generate potential mutual benefits.

Samarkand's wine is considered as one of the best in the Central Asian region. This is facilitated by fertile soil, a mild climate and abundant sun. The region has great potential to further develop wine tourism. According to statistics, 564.3 thousand tons of grapes (38.7 thousand tons of grapes from the Taylak district. and 30.2 thousand tons of grapes from the Samarkand district were gathered from the Samarkand region in 2019) (Samarkand Regional Statistics department, 2019). The most popular wine tourism attraction in Samarkand is the Khovrenko wine tourism destination, which includes a winery and museum, and is the oldest wine factory in central Asia, and was established by the Russian merchant Filatov in 1868. Today, the winery has won over 80 International Awards producing several varieties of wine, brandy and vodka that can be tasted and purchased.

Sport Tourism

Sport tourism is widely defined as tourist travel to destinations for the primary purpose of participating in sport activities or related events (Standeven, 1998). There are many opportunities to develop sport tourism in the Samarkand region, especially in the Nurabad and Pastdargam districts, which are famous and are ideal places for the national sport competition, Kupkari. In Kupkari, experienced horse-riders carry the body of a dead goat or sheep until they reach the finish line. Kupkari games are mainly held in autumn and spring, when Uzbek people celebrate a national holiday during “Navruz”. Equestrians prepare for the Kupkari competition in advance and carefully choose a strong, short horse of great endurance. The riders usually wear head protection, quilted cotton robes and pants to protect themselves against other competitor’s whips. The prizes for the Kupkari winner may be expensive appliances or a car.

Adventure and Nature-based Tourism

Kane (2002) stated that adventure tourism is defined and marketed as an experience of excitement, danger and risk. Contained in the understanding of risk is the potential of loss, injury and death. According to Adventure Travel Trade Association (ATTA) adventure tourism is defined as a trip that includes at least two of the following three elements: physical activity, natural environment, and cultural immersion (2013). Nature-based tourism can be broadly defined as the visitation to a natural destination which may be the venue for recreational activity where interaction with plants and animals is incidental, or the object of the visit to gain an understanding of the natural history of the destination and to interact with the plants and animals. There is a link between visitors involved in nature-based tourism activities and the natural environment (Wolf, Croft & Green, 2019).

There are many opportunities to develop adventure and nature-based tourism in the districts of the Samarkand region, since the region has great potential and resources for these types of tourism. One of the potential and attractive nature-based tourism resources of the region is Teshiktash rock. It is located between the village of Qoratepa in the Urgut district. This mysterious place has been an area of fascination for a long time. Under the influence of erosion and winds, a beautiful and charming work of art was created from the stone. When you look closely at the hole, you can see the heads of two dinosaurs colliding with each other. According to the Samarkand Department for Tourism Development, the mountain tourism cluster “Koratepa-Omonkutan” and tourism village “Tersak” in the Urgut district will be developed which is described as the best destination for adventure and nature-based tourism.

Religious Tourism

The most common definition of religious tourism refers to “…any kind of travel outside the usual environment for religious purposes” (Patterson & Turayev, 2020). Samarkand is visited by many Muslims every year who come from Malaysia, Indonesia, Iran, Turkey and other Muslim countries. The main destination for Muslim travelers is the "Al Bukhariy" complex, which includes a mausoleum, museum and mosque. Imam al-Bukhari was a great theologian of the East who collected and recorded about 600 thousand hadiths – or legends based on cases of life or some sayings of the Prophet. The Al Bukhariy complex is regarded as a "Second Makkah" and is located in Payarik district, village of Hartang.

Rural or Agritourism

Rural communities see tourism as an opportunity to diversify the economy and to revitalize rural areas. Rural tourism can be defined as an experience in rural areas that includes a wide range of attractions and events which take place in agrarian or non-urban areas. The main features of rural tourism are wide-open spaces, slow tourism development, and chances for tourists to enjoy agricultural activities in natural surroundings (Irshad, 2010). These trends can be summarized as: 1) the stimulation of cultural heritage, folklore, traditions and a renewed interest in buildings and rural landscapes, and 2) health and well-being that is expressed through the pleasure associated with improved quality of life, air, water, and in eating in a healthy way (Ammirato & Felicetti, 2013). Rural tourism's potential tour destinations are districts mostly based on agriculture, farming and fishing. The biggest agriculturally based districts of Samarkand regions are Urgut and Kattakurgan, followed by Payarik and Ishtikhan.

Aim of the study

The aim of this study is to establish the need for greater diversification of new niche tourism markets to improve the economic situation of new destinations that are located in the region of Samarkand, Uzbekistan.

Research Objectives

The following research objectives are based on gaps in the research literature:

1. To determine the tourism potential of different types of destinations in Samarkand and to determine how can they be promoted;

2. To assess the special characteristics of the tourism products to determine whether this will improve the economic circumstances of major stakeholders;

3. To investigate the need for a range of new tourism products to attract special interest international tourists so as to encourage them to visit for longer periods of time.

There are very few research studies that have been conducted on the need for the greater diversification of tourism products for this region based on their tourism potential. There is a need to explore the possibility of offering a more diverse range of tourism products and destinations according to their tourism potential in the 14 districts of the Samarkand region. It is anticipated that attracting tourists to districts and villages where tourism resources are located will have a positive influence on the economic resilience of the local population. In addition, by implementing strategies for the development of these new tourism niche markets, it is expected that tourists will want to stay longer in Uzbekistan and spend more money to support the local economy.

Methodology

A qualitative research methodology was selected as the most suitable means for collecting primary data because it provides a rich description, by the use of semi-structured face to face interviews of experienced tour operators in Samarkand. The research questions were designed to examine the tourism potential of various destinations, and to ascertain the need for greater diversification of tourism products. Because of the numerous lockdowns and travel restrictions due to the coronavirus pandemic, the number of international tourists visiting Uzbekistan had decreased to a trickle, making it impossible to use a quantitative methodology, as it was impossible to achieve a high enough sample size with the collection of large numbers of survey questionnaires.

Sample

Samples in qualitative research tend to be small in order to support the depth of analysis that is fundamental to this mode of inquiry**.** Qualitative samples are also purposive, that is, they are selected based on their capacity to provide in-depth information that is relevant to the phenomenon under investigation (Vasileiou, Barnett, et al., 2018). A total of 10 tour operators were selected by a snowball sampling technique to identify potential interviewees who might be interested in being interviewed. By this method, the interviewers recruit future subjects based on referrals by their friends and acquaintances (Berg, 2014). This is a non-probability sampling technique that is used when it is difficult to obtain other travel agents to agree to be interviewed. This may have been because potential respondents were fearful about speaking out against government policy.

Data Collection

The method used was individual, semi-structured, face-to-face interviews. In tourism research, this method of interviewing is the most popular for gaining an in-depth understanding of a topic where differences in perception, attitudes, impacts, behaviors and practices are important (Picken, 2017). Face-to-face interviewing allows more detailed questions to be asked and allows the researcher to re-word questions if they are not understood. Furthermore, the researcher is able to detect and analyze the interviewee's body language when asking the questions.

The semi-structured interview uses open-ended questions that are prepared in advance. According to Hancock (2002), "Semi-structured interviews tend to work well when the interviewer has already identified a number of aspects that he wants to be sure of addressing" (p. 10). This saves time and helps to reduce discussion about irrelevant topics. The interviews were recorded on the researcher's mobile phone after written permission was provided by the interviewee.

Data Analysis

Data analysis is the process of reducing a considerable amount of information to make sense of it. According to Patton (1987) three things happen during the data analysis stage: the collected data is organized, data is then reduced through summarizing and categorizing, and patterns and themes in the data are determined and connected. Unlike quantitative data, qualitative data refers to collecting non-numeric information, including interview tapes and transcripts, taking notes, and video and audio recordings. The data analysis process for this research began by analyzing the gathered data using an inductive content analysis to identify common themes (Galanis, 2018). Firstly, the researchers began by transcribing the interviews from the tape recordings to computer files, then reading and examining the written transcripts. Secondly, after reading the collected data, common and similar responses and themes were highlighted and grouped into major and minor themes according to their relationships with each other. By coding and sorting the data in this manner, the researchers were able to compare different 'pieces' of data relating to each question and to separate them into different file folders for further analysis. A frequency count of various key words or categories was then conducted to determine the significance (Miles & Huberman, 1994). All findings are presented in the next section in a de-identified form with pseudonyms used throughout to ensure the anonymity of the study respondents.

Interview Question*s*

In order to maintain consistency between the research objectives and the data, 10 interview questions were written to guide the interview process. These questions related to the themes associated with tourist attractions, destination potential and the diversification of tourism products. The following questions were developed and used in the interviews:

1. Could you compare the tourism industry of the Samarkand region before and after the coronavirus pandemic?

2. How has COVID-19 affected your business?

3. Are there sufficient tourist attractions or products in the Samarkand region to develop the niche tourism market and to attract special interest tourists?

4. Is there an appropriate mix or diversity of tourist attractions and products in the Samarkand region, have they improved in the past ten years, and why do you think that?

5. Do you have any plans or strategies to broaden the mix or diversity of tourist attractions and products in the Samarkand region, and, if so, what are these plans?

6. Are there any differences in the tourist attractions and products in the Samarkand region that are visited by international tourists as compared with domestic tourists? If so, what are the differences?

7. Which are the main tourist attractions and products in the Samarkand that are often included in packages put together by tour operators?

8. Does Samarkand have a clear and coherent image as a tourist destination, and if yes/no why do you think that?

9. Based on your experience what features of the tourist attractions and products in Samarkand are tourists most satisfied with?

10. Do the tourist attractions and products effectively provide maximum economic returns and jobs for local people in Samarkand?

Results

Profile of the Respondents

To collect the required data, individual interviews were conducted with experienced tour operators (n=10) who all had been working in the tourism and hospitality industry for at least the past three years. The interviews included 6 males and 4 females whose average age was 28 years. Because many had had previous jobs as tour guides, they were able to provide knowledge about the tourism potential of the Samarkand region and tourist satisfaction levels during their trips. All respondents had a high level of education, having received their academic degrees either at Samarkand Institute of Economics and Service, or Samarkand State Institute of Foreign Languages. The interviewees did not want to provide their names and places of work, preferring to remain anonymous. Thus, the names of the respondents were replaced with the use of pseudonyms to ensure the anonymity of the study respondents (see Table 2).

Table 1
Socio-Demographic Profile Of The Respondents

Name	Age	Sex	Current Occupation	Previous job	Educational level	Graduated Higher Educational Institutions
Tom	31	M	Tour operator	Tour agent	Higher degree	Samarkand Institute of Economics and Service
Tina	26	F	Tour operator	Tour guide	Higher degree	Samarkand State Institute of Foreign Languages
Alice	25	F	Tour operator	Interpreter	Higher degree	Samarkand State Institute of Foreign Languages
Baxter	28	M	Tour operator	Tour guide	Higher degree	Samarkand Institute of Economics and Service
Jessica	27	F	Tour operator	Tour guide	Higher degree	Samarkand State Institute of Foreign Languages
Emily	26	F	Tour operator	Tour guide	Higher degree	Samarkand State Institute of Foreign Languages
John	23	M	Tour operator	Tour guide	Higher degree	Samarkand Institute of Economics and Service
Simon	32	M	Tour operator	Teacher	Higher degree	Samarkand Institute of Economics and Service
David	34	M	Tour operator	Tour guide	Higher degree	Samarkand Institute of Economics and Service
Benjamin	27	M	Tour operator	Tour guide	Higher degree	Samarkand Institute of Economics and Service

Themes that Emerged

After categorizing the data, four major themes emerged and were labeled as the following: (1) Collapse of the industry because of COVID-19 pandemic, (2) Growth in domestic tourism, (3) Challenges and opportunities to develop niche tourism market, and

(4) The lack of diversity in tourism products and attractions.

Theme 1. Collapse of the tourism industry of Samarkand because of the COVID-19 pandemic

The negative effects of COVID-19 for the tourism and hospitality industry were felt across the whole world. Due to the pandemic and strict lockdowns, international flights between countries were cancelled and borders were closed, which were antecedents for the collapse of the tourism industry. As the leading tourist destination of Uzbekistan, Samarkand had attracted thousands of tourists from all over the world before the pandemic. Tom (aged 31) stated, *"Samarkand was the leading city amongst Central Asian cities in international tourist arrivals in 2018 and at the beginning of 2019"*. David (aged 34) focused on the economic growth of the industry before the effects of the virus, *"Before the COVID-19 pandemic, the flow of tourists* *in Samarkand region was great. The income of most tour firms had been increasing and they had been working hard to attract more and more tourists to Samarkand".*

However, after the pandemic, the situation changed and the whole tourism industry of Samarkand began to collapse. Tina (aged 26) stated, *"The unexpected appearance of the coronavirus affected all spheres, and the most damaged sphere was tourism. Because restrictions on travelling and the closing of borders, even movement between regions and cities negatively influenced the tourism industry".* John (aged 23) stated that he was more concerned about people who were working in the tourism sphere, *"…tour guides, tour drivers, tour operators had nothing to do. Overall, it resulted in a huge financial loss for the people who worked in the tourism industry".* Jessica (aged 27) agreed when she stated, *"Most people became unemployed. I know some professional guides who changed their professions as they had no choice".*

Theme 2. Growth in domestic tourism

As international tourism came to a standstill to prevent the spread of the virus, tour operators were forced to change their focus from foreign tourists to domestic tourists in order to maintain their business and to maintain a regular income. Tina (aged 26) stated, *"After the pandemic, it became difficult for Uzbekistan to redevelop international tourism, but Uzbekistan was paying closer attention to developing domestic tourism, and the government was focusing on helping tour organizations and tourism stakeholders by lowering taxes and allocating subsidies".* Jessica (aged 27) also stated, *"After the pandemic, thanks to God, we are working with domestic tourists, as we had fewer tourists from Russia, Belarus and Kazakhstan".* Emily (aged 26) thought that the pandemic also had a positive effect: *"After the regional lockdowns were opened, more and more people were eager to travel and started travelling, and Samarkand offered up to 50% discounts for their services, which assisted in attracting a large number of domestic tourists who were encouraged to visit".* John (aged 23) also supported the idea of the development of domestic tourism after the pandemic when he stated: "*Domestic tourism didn't affect us so badly; because there were no foreign tourists, the costs of transportation and entrance fees for locals decreased, and different kinds of discounts were offered".*

Theme 3. Major challenges and opportunities to develop the niche tourism market

Almost all respondents stated that Samarkand had adequate tourism resources and attractions to develop special interest tourism and to attract new tourist segmentations. Moreover, they thought that the development of the niche tourism market was pivotal for Samarkand to become a world tourism destination. Baxter (aged 24) stated, *"We have all the opportunities to develop niche tourism. Unique architectural monuments included in the UNESCO cultural heritage list, delicious* *cuisine (legendary Samarkand bread and pilaf), and hospitality of the people have attracted and will continue to attract tourists. Guests are more and more interested in getting some kind of special experience, in unusual visits, they want to diversify in choosing excursions to interact with the local population, to be engaged in cultural traditions and customs"*.

Furthermore, many of the respondents thought that Samarkand had the potential to develop nature-based tourism, including ecological and mountain-based tourism. Benjamin (aged 27) stated, *"We have eco-tourism resources and nature-based tourism resources which are still new for tourists and even for some local tour operators"*. Tina (aged 26) also agreed when she stated, *"We have enough resources to develop nature-based tourism, such as hiking, fishing and picnicking"*. Several also shared their experiences about niche tourism. Alice (aged 25) stated, *"We organize tours not only across the city but also to the mountains, and arrange trekking tours with tour guides where tourists can spend nights in the mountains."*

However, several respondents stated that there were major problems which were main obstacles to developing a niche tourism market in the Samarkand region. Tina (aged 26) stated, *"The lack of infrastructure and the similarity of tourism products, the lack of eagerness to learn and investigate new attractions and destinations are the major problems in developing special interest tourism"*. Simon (aged 32) also added his perspective regarding the difficulties in developing the niche tourism market, *"The main problem which is a great obstacle is the infrastructure and lack of facilities to develop special interest tourism. The level of service sphere for a niche tourism market is also very poor"*.

Theme 4. The lack of diversity in tourism products and attractions and strategies to diversify them

There was general agreement that the tourism products of Samarkand that were usually offered to foreign tourists were very similar. Jessica (aged 27) agreed when she said, *"Each tour firm offers the same products,which are usually tours around historical monuments"*. Emily (aged 26) supported this, *"I think there is no diversification in tourism attractions and products in the Samarkand region because most of them are historical monuments and are specialized for historical tourism"*.

In spite of the similarity in tourism products, most respondents agreed that there was a need to diversify tourism products and several shared their future plans regarding the development of specific types of tourism, and specifically nature-based tourism. Tina (aged 26) stated, *"I am going to focus on active forms of tourism, especially nature-based and mountain tourism."* Jessica (aged 27) also stated, *"We are working on developing ecological and sustainable tourism. We are taking* *tourists to the mountains of the Urgut district…the interest of domestic tourists to visit eco-destinations is increasing these days"*. Simon (aged 32) also supported the development of nature-based tourism, *"Our plan is to develop nature-based tourism, including rural tourism, agritourism, mountain tourism and ecotourism"*.

Discussion Of Results

Research Question 1: What is the tourism potential of different types of destinations in Samarkand, and how can they be promoted?

Samarkand is a well-known tourist location with its historical-architectural monuments that have attracted international tourists for many years. Interviews conducted with tour operators indicated that before the pandemic, Samarkand had been a leading tourism destination with great potential, attracting a considerable flow of tourists from different parts of the world. During the interviews, the majority of tour operators agreed that the tourism potential of Samarkand was its architectural heritage, including Registan Square, the Amir Temur mausoleum, Bibikhanum mosque, Shakhi Zinda complex, Khazrati Khizr mosque and Khoja Doniyor mausoleum. Gaibnazarova (2018) stated that in the Samarkand region there are 1,851 tangible-cultural heritage objects, inclusing 1,105 archeological, 670 architectural, 37 historical attractions, 18 monumental, and 21 memorial zones. According to Khusenova and Rakhmonov (2018), 37.7 % of tourism resources in Uzbekistan are situated in the Samarkand region. However, The Minister for Tourism and Sport, Aziz Abduhakimov, further stated that only 5% of the tourism potential of Samarkand is actually used (The Tashkent Times, 2021). These figures support the tourism potential of Samarkand region which is centered around tangible-cultural heritage objects.

The COVID-19 pandemic resulted in international tourism drying up, creating a new focus on domestic tourism to help mitigate the negative influence of this virus. Most of the respondents stated that after the easing of quarantine measures in Samarkand, tourist attractions were mainly visited by local people. This change in emphasis was supported by a presidential decree on May 28, 2020 which stated: "Urgent measures are needed to support the tourism sector to reduce the negative effects of the coronavirus pandemic." This helped to restart domestic tourism, as "green" and "yellow" zones were created to revitalize the activities of tour operators, tour agents, accommodation facilities, and cultural-heritage objects. These opportunities were aimed at supporting domestic tourists to travel around the Samarkand region once again.

Another factor that encouraged domestic tourism in the Samarkand region was support from the Samarkand Regional Department for Tourism Development, when they announced a "tourism month" from the 15th of December, 2020 until the 15th of January 2021. This resulted in 117 accommodation facilities, 50 tour operators, 10 transport companies, 48 restaurants and all cultural-heritage sites in the region offering up to 50% discounts. This attracted thousands of people to Samarkand from other regions of Uzbekistan. As a result of this initiative, 42,400 people from different cities and districts, and 60,100 people from regional areas of the country visited Samarkand in one month (Press service of Samarkand Regional Department for Tourism Development, 2021).

The Organization for Economic Co-operation and Development (OECD) concluded that domestic tourism had softened the negative effects of COVID-19, and many governments took prompt actions to revive and re-activate the tourism industry to protect jobs and businesses related to the tourism sector. However, as the OECD (2020) stated, "the real recovery will only be possible when international tourism returns. This requires global co-operation and evidence-based solutions so travel restrictions can be safely lifted" (p. 5). However, in spite of the lower income that was generated from domestic tourism, this form of tourism was the only source of income for many tourism stakeholders in Samarkand during the pandemic.

Research Question 2: What are the special characteristics of Uzbekistan's tourism products, and how can they improve the economic circumstances of major stakeholders?

This study has demonstrated that there is a relationship between the diversification of tourism products and strategies to diversify them. Almost all of the tour operators of Samarkand stated that the tour products of the region were similar; that is, they are based on historical and cultural tours and this is a pivotal issue that needed to be addressed as soon as possible to improve the economic conditions of Samarkand. Bacher (2005) stated that diversification strategies contribute to the growth of the economy and can improve current economic difficulties. Generally, diversification measures are used to increase profits, reduce costs, decrease risks and to develop new markets. According to Zigern-Korn and Olga (2018) tourism destinations need to diversify their tourism products to help contribute to the further development of the region and to assist destinations to explore their tourism potential.

Most respondents stated that one of the best and most appropriate ways of diversifying the tourism products of the Samarkand region was to support the development of nature-based tourism activities, especially hiking, trekking, fishing, rafting and other eco-tourism activities. According to many of the tour operators, nature-based tourism could be developed in the Urgut district of the Samarkand region, thanks to the imminent establishment of the Koratepa-Omonkuton mountain tourism cluster in the Urgut district, and Tersak village, also in the Urgut district, will officially become a tourism village (Samarkand Regional Department for Tourism

Development, 2021). In addition, $2 million have been allocated to improve tourism facilities, and tourism and recreational zones will be established near the Koraepe water reservoir in the Urgut district (Xalq so'zi, 2021). These strategies are planned to help diversify tourism products, to prolong tourists' length of stay in Samarkand, and to create more job opportunities for local people at the destination.

Most of the respondents stated that tourism products and their diversification provided local people with job opportunities and brought extra revenue to destinations. Additionally, diversification may improve the competitiveness of these destinations and reduce seasonality issues (Dwyer and Kim, 2003; Lopez and Garcia, 2006). Benur (2015) stated that diversification of tourism products is vital to strengthen the economic flexibility of destinations.

Research Objective 3: To investigate the need for a range of new tourism products to attract special interest international tourists so as to encourage them to visit for longer periods of time.

Comments from various tour operators suggest that Samarkand has many opportunities to attract a variety of tourists, and to develop a niche tourism market by using tourism resources to create new tourism products. However, most respondents stated that there were major problems that restricted the niche tourism market in Uzbekistan. These included: a lack of suitable infrastructure facilities at tourism destinations; a lack of eagerness to learn and investigate new tourism attractions; insufficient allocation of money by the government; and a lack of advertising and promotion of tourism resources and destinations. Studies have supported the challenges that are associated with developing a new niche tourism market. According to McKercher and Robbins (1998) the process of developing a niche tourism market is difficult and this requires a high level of marketing knowledge which small tourism firms and agencies generally do not have.

A majority of operators expressed the desire to develop rural and agritourism in the Samarkand region, and several indicated that they had already begun to offer rural tourism products, such as trips to the Kushrabat district of the Samarkand region. Park and Yoon (2009) found that there were a number of distinguishable micro niches associated with rural tourism. These include participating in not only rural tourism but also agritourism, recreational tourism and cultural tourism. In addition, tourists were able to spend two days with a local family living in culturally-decorated accommodation, work as locals on farms and spend time visiting health clinics and spas. According to Irshad (2010): "Rural tourism is not just farm-based tourism. It includes farm-based holidays but also comprises special interest nature holidays and ecotourism, walking, climbing and riding, adventure, sport and health tourism, hunting and angling, educational travel, arts and heritage tourism, and, in some areas, ethnic tourism" (p. 2). This suggests that rural tourism is a potential tourism market for Samarkand which can be developed in districts of the region through the addition of various tourism activities such as wine tasting, working in the fields, and feeding animals which are perfect activities for families with young children who may never have seen a working farm before.

Conclusion

When considering the themes that have been developed, it can be concluded that Samarkand has a great deal of potential to further develop the tourism sphere. Although the tourism industry in this region had been rapidly developing before the pandemic, the emergence of the COVID-19 pandemic totally changed the situation for the tourism industry. This was because very few international tourists visited Samarkand during 2020, due to global travel restrictions and lockdowns. As a result, many tour agencies and hotels closed and employees lost their jobs and suffered from a lack of income, resulting in many being forced to change their jobs. Additionally, shopkeepers who usually sold handmade souvenirs, cultural handicrafts, national fabrics and traditional cloths to tourists also suffered from the effects of the pandemic through the loss in income.

The government of Uzbekistan has attempted to provide some support to the tourism industry during the pandemic by allowing tour operators and tour firms/agencies to organize domestic tours in "green" and "yellow" zones where the spread of coronavirus was lower or with fewer cases of the disease reported. Zumrad and Amiov (2020) stated that it was necessary to support domestic recreational tourism, so that internal flows could compensate for the absence of foreign tourists. Soon the positive effects of domestic tourism began to be seen in the Samarkand region with the local government announcing "tourism months" during the pandemic and offering up to 50% discounts on many tourism services, resulting in thousands of domestic tourists visiting the Samarkand region. In Samarkand, domestic tourism was regarded as the "saver" of the tourism industry of Samarkand and prevented its total collapse.

The findings from this research support the importance of diversifying the tourism sector, in order to encourage tourists to stay longer in this region. A lack of diversity in tourism products was stated as the main reason for the short stay of tourists as no other types of tourism services, programs or excursions were offered. Some attempts have been made by the government to initiate new types of nature-based and rural tourism, but these have been minimal. Samarkand has many opportunities to develop other niche tourism markets such as wine tourism, gastronomy tourism, MICE tourism, sport tourism and recreation tourism. It was stated that, "Samarkand is astonishing not only with its ancient mosques, mausoleums and madrassas but also with its wine. On this blessed land under the scorching rays of the sun grow different varieties of grapes, which by their sweetness surpass their global counterparts" (Wine tasting at the old winery, 2020).

However, problems associated with diversification are a lack of finance, inadequate infrastructure for getting to tourism facilities and the unpopularity of many destinations due to a lack of promotion. The development of tourism in a particular region requires a great deal of improvement in the existing infrastructure which requires an increased amount of investment resources (OECD, 2020). Therefore, the economic importance and level of development of tourism in a region is determined by the availability of greater financial resources. Therefore, the government needs to allocate more money to improve tourism infrastructure and the facilities of these potential destinations.

Limitations

Overall, there is a lack of literature about niche tourism resources in Samarkand, and this was a major obstacle in determining new niche tourism attractions, and analyzing the tourism potential of Samarkand. Another limitation was linked to the sample size and the method of sampling, in which a small number of experienced tour operators were interviewed using a purposive sample. The sample size was small and a larger sample would have helped to increase the validity of the responses. Furthermore, because of the pandemic, many tour operators were not interested in being interviewed, resulting in the researchers having to use a snowball sampling technique to collect the primary data.

Recommendation for further research

In the future, there is a need to expand the case study area to identify further niche tourism markets not only in Samarkand, but also in other cities of Uzbekistan, such as Bukhara, Khiva and Tashkent. This would assist tourism providers to increase the number of visitations and to prolong the overnight stays of international visitors, especially for special interest tourists.

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Gamification Practices in Museums

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Abstract

Museums as cultural institutions serve a large number of audiences. To communicate effectively with their visitors and attract new audiences, museums have to develop new methods and tools. The competition from other alternative leisure time activities makes it increasingly harder for museums to attract visitors. "Gamification" is an effective method for museums to interact with their visitors. Gamification tools have already been implemented successfully in education, health, self-improvement, and other areas. There are various studies on the utilization of gamification in marketing, business, and communication as well. Yet studies on the gamification of museum experiences are scant. The purpose of this study is to close this gap, identify possible gamification methods in museums, and explore the impact of gamification on the visitor experience. In order to do so, interviews were conducted with eight museum professionals. Results indicate that gamification is an engaging tool for a meaningful museum experience for visitors. In addition to the benefits of gamification, some difficulties and challenges were also explored.

Keywords

Museum, Gamification, Motivation, Visitor Experience, Museum-Visitor Interaction

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Introduction

Museums work hard to attract visitors and keep their attention while informing them about their collections. One of the major discussion issues in museum studies is the visitor experience and learning in the museum (Vom Lehn & Heath, 2003). Visitors can have a very dynamic experience in museums while they interact with other visitors, the artifacts, and their environment. According to Pine and Gilmore (1998), such experiences can be examined under four main dimensions. These are: experiences related to education, which are about teaching people new things; experiences related to entertainment, which are about having good time; aesthetic experiences, which are art- and beauty-related experiences; and escape experiences, which are experiences that take people away from their daily worries (Cetin, 2020). Museums that offer one or more of these types of experiences can better satisfy and create loyal visitors. Moreover, these different experiences are shared with others and remembered for a long time.

Gamification in museum settings has the potential to offer all four dimensions of experience. Museums that use gamification as a tool to create positive, unique, and memorable experiences are preferred not only among competing museums but also among other leisure activities (Pine & Gilmore, 1998). Gamification is acknowledged as an important way to create experiences, but gamification in museums is overlooked in the literature. Therefore, the aim of this paper is to identify the components of gamification in museums, a well as the processes and challenges of gamification, and explore its impact on visitor experience. A qualitative approach was adopted and museum experts were interviewed on their perceptions of gamification. The conceptual framework of the study is detailed in the next section.

Literature Review

Games are seen as tools to provide social interaction and have been a part of all cultures throughout history. With each game's own rules and goals, games reveal emotions such as excitement, ambition, friendship, and empathy, which motivate people while they play. These emotions can also be felt through gamification methods, which can bring a different perspective to people's behaviors and habits (Rodriguez, 2006; Walker & Froes, 2011; Deterding et al., 2011).

Gamification was first used in the 1890's as a method in the marketing industry for improving the sales of products and services (Christians, 2018). The term *gamification* was first used in academic literature in 2010, and scholarly publications have increased since then. Research on gamification is mainly focused on social interaction, experience, education, and motivation (Hamari, Koivisto & Sarsa, 2014).

It should be noted that gamification itself is not a product but a process, and the output of gamification is the game. In short, gamification is the process of changing an already existing activity using game elements, so that people can be attracted and motivated (Landers, Auer, Collmus & Amstrong, 2018). Werbach (2013) defines gamification as the use of game design techniques in business or non-game environments, such as a human resources management. Redesigning the daily routines and tasks of business life in a more gamified and interactive way will make employees more effective and efficient, and will also increase their motivation by creating a fun environment. Werbach (2014) focuses more on user experience and sees gamification as a process, arguing that game design elements should be carefully selected, combined, and applied to non-game environments (Simpson & Jenkins, 2015; Sailer et al., 2017). Marczewski also defines gamification as activities aiming to influence behavior by increasing motivation and commitment in people (Marczewski, 2013).

Deterding et al. (2011) state gamification as the use of game elements and game design methods in non-game areas, and they focus on the building blocks of gamification. According to them, three concepts stands out in gamification (Deterding et al., 2011; Sailer et al., 2017). These are the game elements (i), which contain tools, such as cooperation, competition, strategy, and so on, that make up the game and help the players adapt to the game. Game design (ii) is the phase in which the game starts as an idea and becomes the game for the user. This includes many phases, such as idea generation, idea maturation, scriptwriting, character design, setting up the player journey, setting up the reward system, determining the rules of the game, leveling the challenges, designing the visuals, designing the sound, deciding on the music or composing the music, prototyping, and testing. Gamification aims to integrate game elements into processes and environments such as work projects, education, health, personal development, parenting, and so on, which would not traditionally be considered games. This non-game environment (iii) is the third concept studied under gamification (Gamification Guide, 2019).

Gamification improves both intrinsic and extrinsic motivations. According to Ryan and Deci (2000), motivation is very important for the performance of an activity. If a person finds an activity very interesting and has fun, and if he is very enthusiastic and energetic, this is due to intrinsic motivation. On the other hand, if the cause for a behavior is external (such as environmental pressure, punishment, praise, reward, etc.), the reason for this behavior is extrinsic motivation. Therefore, just as they have different values, people also have different motivation styles (Ryan &Deci, 2000). For example, in 2009 the Volkswagen Company developed "The Fun Theory." They designed the "The World's Deepest Bin" project to draw attention to environmental awareness. The Project included entertainment elements and was designed to both positively affect people's behavior and to attract attention. With sensory sound effects placed in the bin, the feeling of falling into a very deep valley was created when a piece of garbage was thrown into the bin. People who threw their garbage in it were also curious to look into the bin to understand the source of the sound. The other project was "The Piano Stairs," built next to the elevators at metro stations. The stairs were designed to play piano notes on each step. This project, which increased the use of stairs by 66%, was fun for people and motivated them to stay fit. In another, similar application, a slide was built next to the subway stairs so that people in a hurry could use the slide to both go down faster and have fun (Bohyun, 2015). Gamification practices that can be adapted to daily life also show the teaching aspect of gamification while entertaining the audience.

Museums can also tell the stories of their collections to their visitors through gamification applications designed for their target audiences. But studies about gamification practices and their effects in the context of museums are scant. First of all, museums should know their audience well and design gamification applications to increase the motivation of their target visitors. And these applications should be designed in a way that will contribute to people's learning while they have fun, to create positive behavioral changes (Bohyun, 2015). In traditional museums, visitors generally experience and learn about the artifacts by reading and by watching their environment in a passive way. In this case, visitors become passive participants. Active participation, on the other hand, is defined as the interaction of visitors with the environment both physically and mentally (Robson et al., 2014). Social interaction is another important element that affects the experience in museums. It is a great advantage for museums that visitors can interact with each other, and it is extremely important that they learn new information from the collections exhibited in the places they visit. Gamification is one of the approaches that will help increase this interaction among visitors and collections (Ciolfi & McLoughlin, 2012).

In addition, different gamified applications also support the learning process by offering fun. Gamification is also emphasized in order to increase young audiences' interest in and interaction with museums (Squire & Jenkins, 2003). Teenagers usually do not prefer to spend their free time in museums. Entertainment is very important to attract this growing audience to museums. For example, The Victoria and Albert Museum in England created an application for university students in collaboration with teachers and designers. Teenagers enjoyed participating in the game because it was a fun activity. In the application, they followed the directions uploaded to mobile digital devices. For example, students were asked to laugh out loud and watch other visitors' reactions. They were also asked to guess what comments were made by other visitors about a piece, secretly take photographs of visitors' ankles in front of a Tudor-era bed, and write messages to other visitors. Additionally, in front of a section where plates were displayed, students were requested to play a video of someone breaking the plates and watch the reaction of other visitors. Teachers and curators observed that such unusual practices in a museum, which actually is a place students find quite boring, make them feel good. At the same time, students learned a lot of new information with this application. By enabling the students to see objects that would not normally attract their attention, this gamification activity helped them observe these objects from a different angle and question their thoughts and perceptions of a museum (Walker & Froes, 2011).

Therefore, the entertainment element of gamification also makes processes perceived as boring (both at work and in other areas of life) more enjoyable for the participants and enhances creativity (Simpson & Jenkins, 2015).

Method

This study aims to investigate gamification practices in museums so that museums can become interesting places for visitors to have a meaningful museum experience. For this purpose, interviews were conducted with museum professionals. In these interviews, the main research questions were identifying the benefits of gamification practices in museums, the difficulties encountered in these practices, and the characteristics of successful game design in museums. Five years of experience was set as a recruitment criterion for the participants in order to collect in-depth answers. The concept of gamification was reviewed in the literature and four open-ended questions were prepared as follows:

1. What are the tools and applications you offer your visitors to have an effective experience in your museum?

2. What do you think are the benefits of gamification practices in museums?

3. What are the difficulties encountered in gamification practices in museums?

4. What is the ideal game set-up in museums?

Initially, interviews were conducted with respondents from the two most-visited museums in Istanbul (Topkapı and Dolmabahçe Palaces). With the guidance of these professionals, the contact information of professionals in other museums was collected by applying snowball sampling. An appointment request was sent to these museum professionals via e-mail and meetings were arranged. The interviews took place at a convenient time and location based on respondents' schedules.

The interviews were electronically recorded and transcribed into written text. Each interview took approximately 45 minutes and a total 37 pages of transcribed data were analyzed. Some museums, on the other hand, stated that they found it appropriate to answer questions in writing instead of through face-to-face interviews due to Covid-19 pandemic restrictions. The requests were accommodated and respondents were allowed to send their answers via e-mail by recording their voice. The age range of the museum professionals was 32-55, and their university education was in different disciplines, including art history, history, archeology, philosophy, philology, and economics. The experience of the professionals was between 5 and 30 years. Therefore, experienced museum professionals from different disciplines were recruited, which also enhanced the representativeness of the sample. Table 1 displays information about the respondents, their experience, and education. Respondents were also given pseudonyms (R1 to R8) to protect their anonymity.

Table 1
Museum Professional Respondents

Museum Professionals	Experience Year	Education	Workplace
R1	10	Art History	Meşher Art Gallery
R2	5	Philosophy	Yapı Kredi Culture and Art
R3	6	History	Istanbul Research Institute
R4	11	Economy/Culture Management	ANAMED (Research Center For Anatolian Civilizations)
R5	13	Art History	Troia Museum
R6	15	Philology	Dolmabahce Palace
R7	25	Art History	National Palaces Painting Museum
R8	30	History	Museum of Palace Collections

Adopting a qualitative enquiry, the study used semi-structured interviews as the main data collection tool. Respondents were asked about their experiences and the gamification practices applied in their organizations, the impact of such practices on effective museum experience, the additional benefits of these applications, the challenges they encountered in adopting gamification tools, and the characteristics of games they created. The transcriptions were content analyzed. Keywords were highlighted and coded under different categories, such as determination of exhibition content, target audience, transmission of information, and visitor engagement. Additionally the benefits and difficulties of information transmission were also explored. Initially this open-coding process was conducted by each researcher individually. Authors then came together to discuss their findings and emerging categories. A consensus was sought for each theme to improve the reliability of the findings. These are discussed in the next section.

Findings

Based on the content analyses, the gamification process in museums starts with understanding the target audience of the museum well and determining the content of the exhibitions. Museum professionals stated that museums differ primarily based on their exhibition contents. According to museum professional Rl, museums are divided in two: there are spaces where valuable works are exhibited and their stories are told (i), and where more academic subjects with conceptual, abstract messages are exhibited (ii). The target audiences of these museums are also different from each other. While art-oriented exhibitions target a wider audience, for the exhibitions with conceptual and abstract messages, their target audience is more limited. The transfer of the information about the collections to the target audience should be done with the appropriate tools. The important thing at this stage is that the tools to be used in information transfer are understandable by the target audience. The information should be transferred in a simple, short, and gamified way. This process is displayed in figure 1.

Figure 1. Gamification Process

According to museum professional R2, if information boards are used, these should be as simple and understandable as possible. Depending on the content of the exhibition, it has been stated that the explanations are sometimes supported by maps or diagrams/charts as well as audio/video works, such as interviews of experts, collages, and short narratives. In some of their exhibitions, visitors were also provided with information via touch screens. Again, according to the content of the exhibitions, museum professional R3 stated that when architectural and graphic design applications are used, these applications are designed to provide an effective and a fun experience to their visitors.

Likewise, museum professional R4 stated that when academic content is targeted, not only research documents but also digital content such as photographs and videos are used in order to make it understandable for everyone.

Museum professional R2 noted that in guided museum tours for adults and students, the narratives are supported by particularly interesting stories and anecdotes. R2 also stated that they provide spaces to universities to give some of their courses in their museums. In addition, children's activities and programs are prepared according to all ages, interests, and capacities. For example, it was stated that depending on the content of the exhibition, booklets are printed with picture/motif completions, where the names of the works are matched with their locations. Painting spaces are also prepared. Again, for school groups, R7 stated that they give students the opportunity to paint and also play treasure hunt games in the museum. In this case, students are provided with an interactive visit to have fun and learn at the same time. These interactive experiences make the visitors active participants in the museum.

R6 has the opinion that the Sultanate Boats (reconstructed boats used by the Ottoman imperial family), which carry visitors from one side of the Bosporus to the other, provide an enjoyable and unforgettable experience. R6 also stated that the concerts given by the Janissary Band on certain days at the entrance of the museum provide an impressive experience to visitors.

R8 stated that since the museum was a palace kitchen in the past, university gastronomy department teachers and students, in particular, had a more effective museum visit by applying drama studies.

In line with the definitions of gamification in the literature, the museum professionals stated that when gamification tools are applied to non-game environments, it is observed that people are more participative in activities they would otherwise find boring. In terms of the benefits and challenges of gamification, as long as practices allow the visitor to have a meaningful visit and fun in the museum, they are considered beneficial by all museum professionals who participated in the study.

R4 stated that as a museum visitor, she felt more involved in an event with gamified applications. Likewise, in the exhibitions they prepared, she stated that when a touch screen or a search button is used in their exhibitions, they usually generate more attention from the visitors.

R5 said that many definitions of museums have been put forward from the 19th century to the present, and that people have referred to museums as prisons (i.e., Eskihisar Prison). R5 said that they came up with this prison analogy because museums can be places where ancient artifacts are exhibited in a showcase in a static and solid form, at a distance from the visitor. It is emphasized that the Eskihisar Prison perception is based on the lack of communication in the classic museum, where the objects are "imprisoned" with little interaction.

According to R5, gamification is providing an opportunity to communicate directly with visitors, establishing an emotional bond between the museum and the visitor, enabling visitors to become museum's followers. In addition, R5 stated that while the artifacts, especially archaeological artifacts, are kept at a distance from visitors due to their fragility, the process of transferring information to the visitors is carried out through new communication techniques and gamification. R5 stated that they had the chance to communicate effectively, especially with children, at the museum. Thanks to gamification, the information to be conveyed and the messages to be given can reach their target quickly and in a planned manner, and in this way, children, especially, become more open to perception with curiosity.

When it comes to the challenges of gamification in museums, more difficulties are encountered in digital gamification than in non-digital games. R5 stated that due to excessive use, digital devices can break down quickly. For this reason, which was also stated by R1, a technical team should always be ready. This situation both increases the costs in terms of maintenance expenses and can cause financial problems as the applications need to be renewed. Digital tool also become obsolete within a few years. In addition, senior visitors are a generation away from digital devices. Therefore, they may find some of the applications complicated to use. Hence, the design of such applications should be as clear and easy as possible to use.

On the other hand, non-digital gamification often does not appeal to young people, who spend most of their time in digital applications. For this reason, particularly the "Z" generation easily gets bored with traditional games and thinks that the museum does not appeal to them. Additionally, R5 stated that there are big difficulties in reaching teenagers and establishing communication with them based on their experiences.

Although gamification applications provide an enjoyable experience for visitors, these applications can sometimes overshadow the original work, exhibition, and message. R4 mentioned that for this reason, the dose of gamification needs to be adjusted carefully. The game should be prevented from becoming the main product of museums and should always be related to the museum's mission and contents of the exhibitions. In addition, the content of gamification should be appropriate and understandable for all age groups. The expert staff in each museum should investigate the needs of the target audiences and follow the innovations in the field of gamification.

One of the points stated by R1 and R4 is the need to measure the effectiveness of gamification applications on visitors. In addition, understanding the impact of gamification on museum experiences will facilitate the spread of such practices. Hence, visitor exit surveys gain importance.

Museum professionals were also asked for their opinions about the applications they have not developed yet, but have planned for the future. Accordingly to R3, 2D applications can be counted among the more effective gamification applications than can digital versions. In addition, R5 said that education workshops, drama, theater performances, and mobile museum studies are among the future plans of their museum with regards to gamification applications. In addition, there is the idea of bringing children together with the museum in schools with mobile museum applications.

Discussion and Conclusion

According to the museum professionals, museums that interact with their visitors using appropriate gamification methods attract more visitors and are considered more successful than classic museums that do not communicate with their visitors and do not create any interaction between the exhibited works and their visitors.

Marczewski (2013) mentioned that gamification aims to affect behaviors by increasing motivation and commitment in people with game like thinking, game metaphors, and game elements. So museums can provide an enjoyable experience by offering an active participation opportunity to their visitors and can increase their motivation with gamification applications. These experiences are important for museums to create loyal visitors who recommend them to others, contributing to the development of both visitors and museums. Gamification applications particularly facilitate communication with children, so that children can learn information conveyed by the museums easily, while having fun. These gamified applications also increase memorability. Therefore, gamification practices can secure children as permanent museum visitors of the future and will be able to contribute to the cultural development of society, which is the main mission for any museum.

Although respondents mentioned that the new generation is harder to reach, museum professionals acknowledge gamification as one of the solutions. Literature supports the idea that there is a game suitable for every person (Cetin, 2020). Studies and examples show that games as tools of providing social interaction throughout history provide people with a sense of freedom, which increases creativity. Hence the pessimistic approach to reaching young people can be overcome by designing games based on the young generation's profile and interests. Moreover, research and practice show that there are some games in museums designed for young people that do effectively create engagement and interest from younger generations. Meanwhile studies have also shown that visitors' biggest motivation (80%) for going to a museum is to have fun (Lui & Idris, 2018). In the past century, despite an increasing number of alternative leisure activities, museums have made great efforts to stay attractive for their visitors. Both in virtual and physical environments, museums are focused on entertaining their visitors in addition to their mission of conveying information and education. Therefore, the quality of interaction between the museum and the visitor is the major discussion.

Museums are no longer static; as dynamic spaces, they adapt new practices, especially in terms of visitor-centered approaches. Gamification is one of the practices that provide a fun time and an effective experience in museums for visitors. Museums that can communicate effectively with their visitors and offer them a comfortable ambiance where they can interact with their environment, and allow them both to have fun and learn, provide a meaningful museum experience.

To conclude, gamification can be used in museums to enhance the visitor experience. However, the contents of the games should match the mission of the museums, their exhibitions, and the needs and profiles of their target visitor groups. Gamification methods to be used in museums should be designed in a way that is appropriate for all age groups and that motivates their visitors, in order to give them emotional and mental experiences. There are also challenges of gamification in museums, such as the cost of introducing and maintaining gamification applications and tools. The use of digital devices can also be difficult to understand. That's why these devices should be clear and understandable for all age groups. In addition, digital devices can easily break down and this can cause extra costs. However, as acknowledged by the museum professionals, the benefits of gamification in museums outweigh its difficulties, and gamification can meet the expectations of visitors in museums.

Museums that want to communicate effectively with their visitors can design gamification applications using the findings obtained as a result of the research. The findings offered in this qualitative study can be used to collect quantitative data in future studies on gamification applications in museums, and measure their effects on visitor behavior using a questionnaire. Market segmentation analyses can also be utilized and scales can be developed in different areas of gamification in museums.

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