



Gastrotourism/gastrodiplomacy through gastrophysics: A multisensory showcase of Saudi Arabian cuisine

Jozef Youssef^{a,*} , Mawadah Bajrai^b , Charles Spence^{c,**} 

^a Kitchen Theory, 9a Alston Works, London, UK

^b Culinary Arts Commission, Ministry of Culture, Saudi Arabia

^c Crossmodal Research Laboratory, Department of Experimental Psychology, Oxford University, Oxford, UK

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ABSTRACT

Al Maidah, a ten-day multisensory and immersive dining experience was developed by Kitchen Theory in collaboration with the Culinary Arts Commission under the Saudi Arabian Ministry of Culture in 2023. The experience was presented as part of the annual marquee culinary food festival Saudi Feast. As a flagship event at the Saudi Feast Food Festival, the initiative sought to elevate and communicate Saudi Arabia's rich culinary heritage, regional biodiversity, and gastronomic future to an international audience through the lens of gastrophysics. The experience combined techniques adapted from modernist cuisine, culturally-relevant storytelling, projection mapping, and various sensory activations in order to create a multi-layered multisensory narrative around Saudi ingredients and hospitality. Working together with local chefs, artisans, scientists, and cultural experts, the experience was structured around a journey that began with guests entering a modern arabesque-themed apothecary serving non-alcoholic beverages based on recipes from medieval Arabian recipes developed in collaboration with Prof Daniel Newman (Chair of Arabic Studies, Durham University). This was followed by a tour around a sensory gallery by Saudi sensory and consumer scientist; Mashael Alhumaidan, and culminated in a six-course chef's table dining experience. Each course was thematically linked to a specific facet of Saudi culture—poetry, art, sustainability, heritage, and innovation—while engaging all of the guests' senses both on and off the plate. This project exemplifies how culinary diplomacy (gastrodiplomacy) can be enacted through experiential gastronomy, engaging both the intellect and emotions of diners while promoting cross-cultural understanding.

Implications for gastronomy

The *Al Maidah* project illustrates the evolving role of gastronomy as a platform for cultural expression, professional development, and international dialogue. By merging modernist culinary techniques with traditional Saudi flavours and rituals, the experience demonstrated how national cuisines can be reimagined within the context of fine dining, without losing authenticity. This balance of innovation and heritage offers a model for other emerging nations seeking to position their food culture on the global stage (e.g., gastrotourism or gastrodiplomacy).

Equally significant were the training and capacity-building elements of the project. The development of local Saudi chefs and

service staff highlights how gastronomy can serve as a vehicle for skills transfer, professionalisation, and long-term industry growth. In this sense, *Al Maidah* functioned not only as an immersive dining event but as a catalyst for expanding Saudi Arabia's fine dining and hospitality sector.

More broadly, the project underscores gastronomy's potential to act as both soft power (gastrodiplomacy) and an engine of economic growth (gastrotourism), aligning with Saudi Arabia's *Vision 2030* ambitions to diversify its cultural and tourism industries.

1. Introduction

Gastrophysics is the field of research that looks to examine the

* Corresponding author.

** Corresponding author.

E-mail addresses: jozef@kitchen-theory.com (J. Youssef), charles.spence@psy.ox.ac.uk (C. Spence).

sensory and psychological relationship we human beings have with food (Spence, 2017). Such insights allow for the creation of more immersive, meaningful, and memorable food and beverage experiences. This field of research has grown in prominence largely due to a widespread appetite for immersive, multisensory narrative-led dining experiences (Spence and Youssef, *in press*), that have emerged over the last couple of decades, with some of the world's top chefs, Michelin star restaurants, and artistic culinary pop-ups now curating more immersive and narrative led experiences (see Spence and Velasco, 2025, for a review).

Over this same period, there has also been a growing trend in the use of food as a means of cultural exchange, national brand building (Japan and San Sebastian, Spain), culinary tourism (Peru, Turkey) and the exercise of soft power (S. Korea) – all of which can be classed as forms of ‘gastrodiplomacy’ (see Spence, 2016, for a review). One now finds many high-profile chefs promoting not only their creative passions and culinary creations, but also the history and heritage of their own (or another's, as in the case of Atica in Paris; <https://aticaparis.com/>) culinary culture (see also Uçuk et al., 2026). In fact, this has become one of the main themes for many of the world's top restaurants (Noma, Central, Pujol, DOM, etc ...; Jongsuksomsakul, 2024; Masmoudi, 2025). Therefore, when the Saudi Culinary Arts Commission sought to design a culinary showcase to help promote Saudi Arabian gastronomy, they did so by creating an immersive, multisensory experience featuring key narratives around Saudi Arabian art, poetry, history, culture, hospitality, sustainability and innovation. This provided us with the opportunity to conduct a case study of the experiential approach to multisensory immersive dining in a novel cultural context.

2. Defining gastrotourism and gastrodiplomacy

The growing academic interest in food as a vehicle for cultural exchange (e.g., Goto et al., 2025; Uçuk et al., 2026) has given rise to two related but distinct concepts: Gastrodiplomacy and gastrotourism. Gastrodiplomacy can broadly be understood as the strategic use of food and cuisine as instruments of soft power to foster cross-cultural understanding, shape national identity, and influence international perception (Spence, 2016). Governments and cultural bodies often employ gastrodiplomacy to showcase national culinary traditions abroad, strengthen diplomatic ties, and enhance cultural visibility. Examples include South Korea's promotion of ‘Hansik’ as part of its global branding efforts, and Peru's investment in culinary promotion to position itself as a gastronomic destination. In this sense, gastrodiplomacy extends beyond the act of dining—it is a cultural and political strategy in which food becomes a language of diplomacy (Low, 2020; see also Thevathasan, 2017).

Gastrotourism, by contrast, refers to the pursuit of unique and authentic food experiences as a central motivation for travel (UNWTO, 2023). The United Nations World Tourism Organization (UNWTO) frames gastronomy tourism as a driver of sustainable development (Padyala and Kiran, 2025), as it promotes local culture, supports small producers, and contributes to regional economies (see also Di-Clemente et al., 2019). Gastrotourism emphasizes not only consumption but also education and participation—inviting travellers to engage with local foodways, ingredients, and traditions. As such, it has become a significant pillar of cultural tourism worldwide, with destinations like Kyoto, Oaxaca, San Sebastián, Lima, and Istanbul leveraging their culinary heritage to attract international visitors.

Taken together, gastrodiplomacy and gastrotourism reflect the expanding role of cuisine as both a cultural resource and an economic asset. They provide the conceptual framework for projects such as *Al Maidah*, which combine narrative-led gastronomy with multisensory experience design to promote Saudi heritage in both domestic and international contexts (Dickinson, 2019).

3. ‘Edutainment’ & narrative-led dining

Kitchen Theory's approach to ‘edutainment’ merges educational intent with multisensory engagement, transforming dining into an immersive multisensory learning experience/journey. Rooted in the principles of gastrophysics and narrative design, this approach treats food as a medium for storytelling and cultural exploration. In the *Al Maidah* experience, this was exemplified by the structured journey across Saudi Arabia's five regions (the northern, southern, eastern, western, and central regions), where each course served as a chapter in an unfolding cultural narrative (see Alqurashi et al., 2025). Note that there has been a rapid expansion of interest in experiential dining in recent years (Spence and Velasco, 2025; Velasco and Obrist, 2025; Velasco and Spence, 2024).

Al Maidah was a first of its kind immersive culinary experience hosted in the Kingdom of Saudi Arabia, designed to educate and take guests on a *Hafawa* (Hospitality) journey across the five regions. Each course offered was designed in order to offer meaningful insights into Saudi Arabian culture, culinary heritage, customs as well as exploring themes including art, poetry, sustainability, and innovation. Each of the dishes featured ingredients, flavour pairings, and cooking techniques from a selected region.

Rather than simply presenting traditional and heritage dishes, the experience deconstructed and reimagined Saudi Arabian culinary culture through the senses. Guests were not passive recipients but active participants—invited to see, touch, hear, and taste the stories that were weaved throughout the multisensory experience.

This aligns with Kitchen Theory's philosophy that the guest journey must start with emotion and intention, not just ingredients (see <https://kitchen-theory.com/>). Through projection mapping, curated soundscapes (live poetry reading), live art performances and sensorial cues, dishes became artifacts of meaning, not just flavour.

4. Context and concept development

4.1. Kitchen Theory's design ethos

Since inception in 2013, Kitchen Theory has designed a number of multisensory and immersive dining experiences, with narratives and themes related to national cuisines. This has included 2013's Japanese inspired ‘Kaiseki by Kitchen Theory’, 2014's Nordic-inspired ‘Nättúra’ concept, 2015's ‘Mexico by Kitchen Theory’ among others (e.g., Youssef and Spence, 2021a, b). The experiences designed are not intended to simply replicate, parody, or serve as caricatures of national cuisines, but rather they represent a deep dive into the country's ingredients, traditional flavour pairings, cooking methods/techniques, rituals, history, heritage and customs. The research into these areas is then formulated to re-build them in to a modern, immersive, narrative-led, fine dining experience.

In the case of Saudi Feast 2023 the team at Kitchen Theory set out to design an authentic modern Saudi fine dining experience, with traditional and cultural values, heritage, customs, rituals and hospitality. Fine dining, especially more modern forms are most often associated with ‘western cuisines’. In the case of the *Al Maidah* multisensory gastronomic experience, the goal was to develop a genuinely unique Saudi Arabian version of fine dining. For example, many of the dishes were eaten by hand (see Spence, 2022a, for a review), while some were designed to be shared between two guests – as such customs are an inherent part of Saudi gastronomic culture.¹

None of the Kitchen Theory team involved in designing and executing the *Al Maidah* multisensory and immersive dining experience were native to Saudi Arabia. As such, it was necessary to bring in local

¹ While also mirroring the increasingly common ‘sharing plates’ concept in many western restaurants.

Saudi Arabian culinary professionals to collaborate on the design of flavour profiles (given that the majority of those who were expected to attend were originally from Saudi Arabia), nostalgia and cultural rituals, thus ensuring their authenticity of the experience. In total, nine Saudi Arabian chefs at varying stages of their careers were hired as the core culinary team, three of the chefs were 'sous chef' level and were the main collaborators on the design of the dishes, each taking charge of two dishes, the additional six Saudi chefs acted as 'chef de partie' level support. The necessity of having local chefs involved in such a project was, in part, due to the uniqueness of Saudi Arabian cuisine, the diversity of dishes found across the Kingdom's five regions, and the sparse number of Saudi Arabian chefs or restaurants located outside of Saudi Arabia representing the national culinary traditions – meaning that there is very little awareness of the cuisine on the international food scene.² As tourism is a central pillar of Saudi Arabia's Vision 2030, the Kingdom is undergoing major expansion and mega-developments to support its economic targets in this sector (see Karolak and Michael, 2024).

One notable initiative by the Culinary Arts Commission is the activation of a chain of Saudi culinary boutiques and cafés under the brand name Irth—an Arabic word meaning heritage, legacy, and inheritance. The concept is designed to narrate and communicate the authentic values of Saudi hospitality while promoting local chefs, farmers, producers, and cultural elements through its dual offering: a retail boutique and an out-of-home hospitality experience (café or restaurant). Currently, Irth operates three outlets in heritage sites across high-traffic cities including Jeddah, Madinah, and Riyadh, in addition to a mobile outlet aboard Aroya—Saudi Arabia's first cruise ship. Through these venues, the Commission has been able to showcase and promote authentic Saudi cuisine, hospitality traditions, and artisanal products from across the Kingdom's five regions. Beyond its local expansion, Irth has also appeared internationally as a pop-up at events such as Taste of London and Sirha Lyon, and it serves as the main F&B offering at the Saudi Pavilion for Expo 2025 Osaka in Japan. See Al-Razgan, Tallab, and Alfakih (2021) for an attempt to explore the food pairing hypothesis in Saudi cuisine using genetic algorithms (Tallab and Alrazgan, 2016).

4.2. A focus on hafawah - Saudi Arabian hospitality

Hospitality holds profound cultural and social significance in Saudi Arabia, deeply rooted in Islamic values and Bedouin traditions. Known as *hafawah*, Saudi hospitality extends beyond simple generosity, representing an almost moral obligation to welcome and honour guests. This deep-rooted hospitality is manifest in various traditions, customs, and rituals, such as the serving of dates and Saudi coffee to guests upon arrival, this remains a ritualized practice that symbolizes respect, generosity, and cultural pride. Indeed, it has been recognized by UNESCO as an example of intangible culinary heritage (<https://ich.unesco.org/en/RL/arabic-coffee-a-symbol-of-generosity-02111>).

This ethos was central to the *Al Mайдah* experience, the design and narrative of the dining journey. From the initial sensory encounters in the apothecary and Saudi Coffee Sensory Gallery to the communal sharing of dishes and performative rituals, each element was curated to reflect the authentic rhythms of Saudi hospitality—emphasizing the themes of generosity, ritual, and human connection. By grounding the multisensory dining concept in *hafawah*, Kitchen Theory and its collaborators created a culturally resonant concept that invited guests not just to taste Saudi Arabia, but to experience its culture.

² Although it is worth noting that this is beginning to change through the efforts of the Ministry of Culture and the Culinary Arts Commission, alongside other governmental entities working at both local and international levels to promote Saudi culture, hospitality, and tourism.

4.3. Objectives set by the Culinary Arts Commission

The Culinary Arts Commission's mission is to make Saudi an authentic gastrotourism destination, the home of incredible culinary experiences and culinary arts as a source of livelihood for its people and communities. From its mission cascades the three focus areas of having culinary arts as an ambassador, experience, and livelihood by presenting the best of Saudi culture and hospitality values, creating unforgettable experience and unparalleled educational opportunities. Through the creation of activations such as *Al Mайдah* the commission managed to serve its mandate by creating an unforgettable first of its kind multi-sensory experience that elevated the definition of dining experiences in the kingdom while supporting and creating opportunities for local talents and producers.

4.4. Cross-disciplinary design of the Al maidah concept

The design of this concept was rooted in collaboration, bringing together nine Saudi chefs - three of whom were more experienced and given 'head chef' designation, along with the six others acting as 'sous chefs'. The three head chefs were assigned two sous chefs each and put in charge of two courses (amuse bouche + starter, intermediate + main, pre-desert and desert). Each team contributed regional knowledge and culinary expertise. They were also supported by various Saudi artisans including a poet, a wood craftsman, and a visual artist (see Fig. 1). This multidisciplinary team ensured that the menu and environment reflected not only flavour traditions but also the broader artistic and cultural expressions of the Kingdom.

4.5. Cultural relevance in design

Each and every aspect of the *Al Mайдah* concept was considered in great detail. Even the name *Al Mайдah*, meaning "the dining table," was selected for its dual cultural and religious significance, evoking a sense of welcome, generosity, and shared experience. The term '*Al Mайдah*' carries a significant religious meaning in Islam as the term appears as the title of the fifth chapter (sūrah) of the Qur'an, Sūrah al-Mā'idah ("The Table Spread"), in this context, the *maidah* symbolizes divine generosity, spiritual nourishment, and the blessings of sustenance provided by God. Within Saudi culture, this religious layer enriches the concept of *Al Mайдah* by subtly connecting the act of sharing a table to deep-rooted cultural values of gratitude, community, and faith.

A central consideration in the design of the *Al Mайдah* dining experience was the incorporation of customs that are integral to Saudi hospitality, thus ensuring that the experience resonated with local cultural values while remaining accessible to an international audience. One such element was the inclusion of shared courses—half of the six-course menu was designed for two diners to share from the same plate. In Saudi culture, communal dining from shared dishes placed in the centre of the table is an important expression of generosity, hospitality, and social bonding, as portions are not restricted and the act of sharing fosters connection (Alqurashi et al., 2025a, b). Given the large chef's table format, and the fact that guests may not all know each other, the decision to structure sharing between pairs of guests allowed for intimacy and ease, avoiding potential discomfort while preserving the spirit of generosity.

In addition, some courses were designed to be eaten by hand—a practice deeply rooted in Saudi culture, which in recent years has also gained popularity in contemporary fine dining. This tactile mode of eating connected diners more directly with the food and honoured local customs (Spence, 2022a). Hot towels were provided with such courses to ensure guests could cleanse their hands without the need to visit the restrooms. These Taif rose (a regional Saudi Arabian variety of rose) scented hot towels, also served as a refreshing olfactory palate cleanser (see Spence, 2022b).

The experience concluded with the burning of *bokhour* (incense), an



Fig. 1. Saudi Arabian artist ‘Al-Nughamshi’ demonstrating a traditional calligraphy technique to multisensory chef Jozef Youssef.

aromatic ritual signifying the close of a gathering. In Saudi tradition there is a saying “ba’d al oud, ma fee gauwd” translating into English as “after oud (incense), there is no sitting”, and so the lighting of incense by the host signals that the evening has come to a close, providing a culturally resonant and sensory final note to the guest’s journey.

4.6. Development of local talent

A key aim of Al Maidah was to develop local culinary and hospitality talent. The core kitchen team comprised nine Saudi nationals, representing a range of experience levels, from emerging cooks to three senior chefs who served as head chefs for the project. Complementing them was a front-of-house team made up of expatriates living and working in Saudi Arabia, many of whom were already familiar with the country’s cultural and service environment. The project was intentionally designed to provide an opportunity for professional development, offering extensive training in both culinary and hospitality disciplines. For the kitchen team, this included mastering modernist cooking techniques, refining mise en place processes, and learning the organisational systems required to manage distinct kitchen sections during a high-pressure, multi-course service. The three Saudi head chefs also undertook public speaking coaching to confidently present their courses in both Arabic and English alongside Chef Jozef, blending technical explanation with cultural storytelling.

For the front-of-house team, training focused on fine dining service standards, guest engagement, and coordination with the kitchen to deliver a seamless multisensory experience. The hope was that this combination of skill development and collaborative execution would not only help to elevate the quality of Al Maidah but also contribute to the long-term growth of Saudi Arabia’s fine dining and experiential gastronomy sector.

5. Pre-dining sensory journey

The pre-dinner phase of Al Maidah was designed as a multisensory primer, setting the stage for the immersive journey that was to follow. It served both as an educational prologue and a sensory awareness tool—engaging guests in an exploration of Saudi Arabia’s gastronomic heritage before the first course was served. Structured around two key components—the *Mushroubat* Apothecary and the Saudi Coffee Sensory Gallery—the aim was to heighten sensory awareness, stimulate curiosity, and immerse participants in the appropriate cultural context.

In addition to its sensory and educational objectives, the pre-dinner phase also served an important practical function. Given the chef’s table format of *Al Maidah*, it was essential to begin the dining portion only once all guests were present, ensuring that the narrative flow remained uninterrupted. The *Mushroubat* Apothecary and Saudi Coffee Sensory Gallery therefore also provided an engaging and purposeful holding space, allowing guests arriving at slightly different times to immerse themselves in meaningful activities rather than wait passively. This approach maintained the experiential quality from the moment of arrival, while preserving the cohesion, pacing, and dramatic arc of the main dining journey.

5.1. The ‘Mushroubat’ apothecary

Guests first entered the *Mushroubat* Apothecary, a lavishly decorated space evoking a modern Arabesque apothecary (see Fig. 2). Here, they were served no-alcohol beverages inspired by medieval Arabian recipes, with ingredient jars, market-sourced spices, and informative displays inviting tactile, visual, and olfactory engagement. This immersive setting offered a hands-on introduction to the spice blends and herbal infusions that form an integral part of Saudi culinary heritage.

Saudi Coffee Sensory Gallery: A sensory gallery led by a Saudi Arabian sensory scientist included sound domes that highlighted various



Fig. 2. The apothecary style drink – with smoky vapour filled edible bubble.

cultural sounds such as the roasting of Saudi coffee beans and the rhythmic pounding of *najr* (mortar) when preparing Saudi coffee. An



Fig. 3. Guests engaging with the aroma station in the sensory gallery.

interactive aroma installation of culturally significant scents (including mastic, rose, saffron and cardamom) was designed for the gallery (see Fig. 3), guests could press an unlabelled button to dispense an aroma via a tube – decorated to look like a flower. This encouraged guests to exercise their sense of smell while playfully engaging with one another to guess the aromas (Galán Silvo, 2022). Finally, the guests were guided through a date tasting highlighting different varieties of dates such as Ajwa, Safawi, Sagai and Sukkaria. The focus of the date tasting was on the texture of the dates, both in hand and in the mouth, the colours, the sweetness, and the overall flavour profile.

In the Saudi Coffee Sensory Gallery, a guided journey by the Saudi sensory scientist Mashael Alhumaidan through sound domes, aromas, and tactile elements introduced guests to the sensory rituals surrounding traditional coffee preparation. The interplay of soundscapes—such as bean roasting or najr (pestle and mortar) pounding—and scents such as green cardamom and mastic (cf. Faruque et al., 2024) helped to emphasize the cultural depth of this ubiquitous ritual.

Together, these pre-dining experiences established a sensory and intellectual, science (sensory and anthropological) backed framework, priming guests to interpret the subsequent courses not only through flavour, but through story, tradition, and cultural resonance.

6. Menu design

One of the central creative goals of Al Maidah was to present a distinctive reimagining of traditional Saudi Arabian dishes—retaining their familiar flavours and cultural essence while transforming their form through modernist culinary techniques. This approach ensured that the dining experience was both nostalgic and novel, connecting guests to Saudi heritage while at the same time surprising them with innovative presentation and texture. The menu incorporated a range of contemporary tools and methods, including dehydrated date paper, edible sheets printed with poetry, spherification, liquid nitrogen for

dramatic sensory effects, and the use of hydrocolloids to create refined gels and mousses. These techniques elevated the visual artistry of the plates, allowing for sleek, sculptural compositions that contrasted with the rustic forms of their traditional counterparts.

Ingredient selection further underscored the balance between authenticity and innovation. Dishes featured unique yet locally rooted ingredients such as camel tenderloin—a delicacy seldom found outside the central region—and *mehyawa*, a fermented fish sauce from the Eastern Province rarely tasted across the wider Kingdom. This reimagining was informed by gastrophysics principles, where visual, textural, and multisensory cues shape the perception of flavour. While the plating and presentation drew on highly modern aesthetics, the flavour profiles were deliberately crafted to evoke feelings of familiarity and comfort through nostalgic aromas, seasonings, and mouthfeel. In this way, Al Maidah harnessed sensory science to honour Saudi culinary heritage while expanding its possibilities within a contemporary fine dining context.

6.1. Course I: As Generous as Hatim

The opening course (see Fig. 4) paid homage to Hatim Al-Tai, the 6th-Century poet renowned for his generosity, whose legacy is foundational to the cultural narrative of Arabian hospitality. This amuse-bouche course was based on the Saudi coffee ceremony, structured around four symbolic stages of coffee service—Haif, Kaif, Daif, and Al-Saif. The culinary elements included date fruits in multiple forms (rotab, tamir, kernels) and Saudi coffee derivatives such as Qishr (husks) and dried coffee cherries. The experience began with a hand-cleansing ritual and mastic incense burning, accompanied by a live poetry recital, grounding the dining event in sensory ritual and emotional resonance.



Fig. 4. Course I: As generous as Hatim.

6.2. Course II: *Iqra'a*

Inspired by the art of Arabic calligraphy, *Iqra'a* explored the written word as a sensory and cultural artifact. Drawing from the Eastern Province, the dish featured Hassawi rice pasta (registered as a Saudi heritage food item in the Slow Food Ark of Taste), seasonal Saudi seafood, fermented lime, and *mehyawa*—a traditional fermented fish sauce. The plating and visual composition drew directly from calligraphic principles, with words such as “consciousness” and “experience” stencilled onto plates using edible inks (see Fig. 5). The course was supported by visual projections and a collaboration with contemporary Saudi calligrapher Nugamshi, reinforcing the link between food aesthetics and visual semiotics.

6.3. Course III: *Al Hida'a*

This intermediate sharing course emphasized sustainability through the use of camel meat, specifically tenderloin (see Fig. 6), a less well known yet delicious cut (Baba et al., 2021; Boukrouh et al., 2025). Accompanied by butternut squash-stuffed matazez dumplings and loomi (dried lime) seasoning, the dish was rooted in the culinary heritage and traditions of the central region of the kingdom. The sensory environment included desert sand projections and audio of Ghna'a Al-Rukban, one of Arabia's oldest musical traditions associated with camel herding, reinforcing the deep connection between environment, animal, and human culture.

6.4. Course IV: *flavours of the earth*

Representing the Southern region of Saudi Arabia, this main course focused on the sensory and emotional associations of winter camping in the desert. The principal ingredient was goat (Gawat et al., 2023), prepared using a traditional hanneth – a heritage method of preparing meat

involving smoking the meat using Markh (a native desert plant). Complementary native herbs and grains completed the dish. Immersive sensory stimuli included rain projections, soundscapes, and the scent of a desert campfire, evoking a powerful nostalgic tableau through multi-sensory layering (see Fig. 7).

6.5. Course V: *the future*

This pre-dessert course was both retrospective and speculative, presenting a modern interpretation of Saudi Arabian flavours as a culinary artifact from a prospective Saudi future (see Fig. 8). The dish combined familiar regional ingredients—evaporated milk, baraka seeds, tea, nutmeg - an ingredient that was for many years banned in Saudi Arabia due to its potentially hallucinogenic properties (see Spence, 2024), and green cardamom—with refined French pâtisserie techniques. Warm, fragrant, and visually minimal, the course was framed by a performance in the form of future-oriented storytelling, positioning Saudi cuisine within a narrative of innovation and cultural continuity.

6.6. Course VI: *Jewel of the kingdom*

Concluding the experience was a dessert inspired by the spiritual significance of Ajwa dates, a variety native to Medina with recognized cultural and religious status. Presented as a French-style molecular ganache tart, the dish layered sweetness and umami (see Fig. 9).

6.6.1. Sensory design

A defining feature of *Al Maidah* was its use of multisensory tools – projection mapping, ambient soundscapes, and culturally resonant aromas – to create immersive atmospheres that supported narrative and emotional resonance. These elements were not supplementary; they were integral to how the multisensory story of Saudi Arabia was told through food.



Fig. 5. Course II: *Iqra'a*.



Fig. 6. Course III: Al Hida'a.



Fig. 7. Course IV: Flavours of the earth.

Projection mapping helped to transform the dining environment with visual cues that aligned with each course's thematic content (see



Fig. 8. Course V: The future.



Fig. 9. Course VI: Jewel of the kingdom.

Fig. 10). For example, desert landscapes were projected during *Al Hida'a*, immersing guests in the ecology of camel herding regions, while rain



Fig. 10. Projection-mapping on the table.

visuals and twilight tones during *Flavours of the Earth* evoked the introspective mood of winter camping in the southern highlands. These visual environments provided spatial storytelling, situating the meal within symbolic Saudi terrains.

Ambient sound design featured curated audio such as the rhythmic pounding of *najr*, the roasting of coffee beans, and *Ghna'a Al-Rukban* camel herding chants. These sounds served as cultural artifacts that reinforced place, memory, and mood, while also enhancing temporal pacing and immersion.

Aromatic cues, including *bokhour* (incense), mastic, cardamom, and desert herbs (such as Markh), were layered throughout the experience. These scents not only complemented the flavour profiles but triggered associative memory and cultural recognition, further anchoring each course in sensory authenticity and ritual.

7. Limitations

One limitation with this study was that no empirical data was collected, due to the nature of the multisensory dining experience, nor was there the possibility to conduct a control condition without any of the experiential elements to assess how much they impacted the guest's experience. Furthermore, given the fact that this was an invitation event, the guests' expectations may have been somewhat different as compared to a regular dining event. One other limitation is the case study approach adopted here, which cannot be generalized.

8. Conclusions

Al Maidah, the ten-day multisensory and immersive dining experience developed by Kitchen Theory in collaboration with the Culinary Arts Commission under the Saudi Arabian Ministry of Culture was held late in 2023. Gastrophysics (Spence, 2017) was used as a means for furthering both elements of gastrodiploacy (Spence, 2016) as well as

helping to introduce the idea of gastrotourism into the Saudi Arabian context (e.g., Kim et al., 2021; see Karolak and Michael, 2024). Over the 10 days on which the dining experience was held, almost 200 invited guests were served, including the Japanese and French Ambassadors. The event succeeded in generating press coverage as well as interest from the international Saudi community, including amongst their number many chefs and food producers. The hope for the future is that the training of the next generation of young chefs will help to advance Saudi gastronomy to a broader international audience.

CRedit authorship contribution statement

Jozef Youssef: Writing – review & editing, Writing – original draft, Conceptualization. **Mawadah Bajrai:** Writing – original draft, Conceptualization. **Charles Spence:** Writing – review & editing, Writing – original draft, Conceptualization.

Declaration of generative AI and AI-assisted technologies in the manuscript preparation process

During the preparation of this work the author(s) used Chat GPT in order to edit and refine grammar and sentence structure. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the published article.

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Data availability

No data was used for the research described in the article.

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