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► **To cite this version:**

Mara Virginia Galmarini, Michel Visalli. Sensory research and Temporal Descriptive Methods: Where is this relationship going?. Science Talks, 2024, 11, pp.100375. 10.1016/j.sctalk.2024.100375 . hal-04611637

**HAL Id: hal-04611637**

**<https://hal.inrae.fr/hal-04611637v1>**

Submitted on 25 Jul 2024

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## Sensory research and Temporal Descriptive Methods: Where is this relationship going?

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### ARTICLE INFO

#### Keywords:

Temporal methods

Guidelines

Scoping review

Descriptive sensory analysis

### ABSTRACT

It is well known that perception of food and drink is a temporal phenomenon. And it is under this premise that several temporal methods have been developed in the past 50 years trying to capture, describe and quantify these sensory changes occurring during food tasting.

More than one hand is needed to count the amount of multi-attribute temporal methods which have been developed since 1994, when the Progressive Profile was first published. From one bite to a whole portion, these methods have been used to evaluate product qualities, consumer behavior and food oral processing, among other challenges. But sometimes it seems that methods are developed faster than they can be validated.

In this presentation 363 research articles (from 1991 to 2022) using temporal descriptive methods were analyzed according to a previously validated protocol. A quantitative and qualitative synthesis of the results allowed the identification of trends in how methods were developed, refined, and disseminated. Some critical research gaps in establishing the validity and reliability of the methods were identified and discussed. Results suggest the need for general guidelines on how to implement the method, analyze and interpret data, and report the results.

Video to this article can be found online at <https://doi.org/10.1016/j.sctalk.2024.100375>.

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<http://dx.doi.org/10.1016/j.sctalk.2024.100375>

Received 8 April 2024; Received in revised form 5 June 2024; Accepted 6 June 2024

Available online xxxx

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Figures and tables

### Multi-attribute temporal descriptive methods

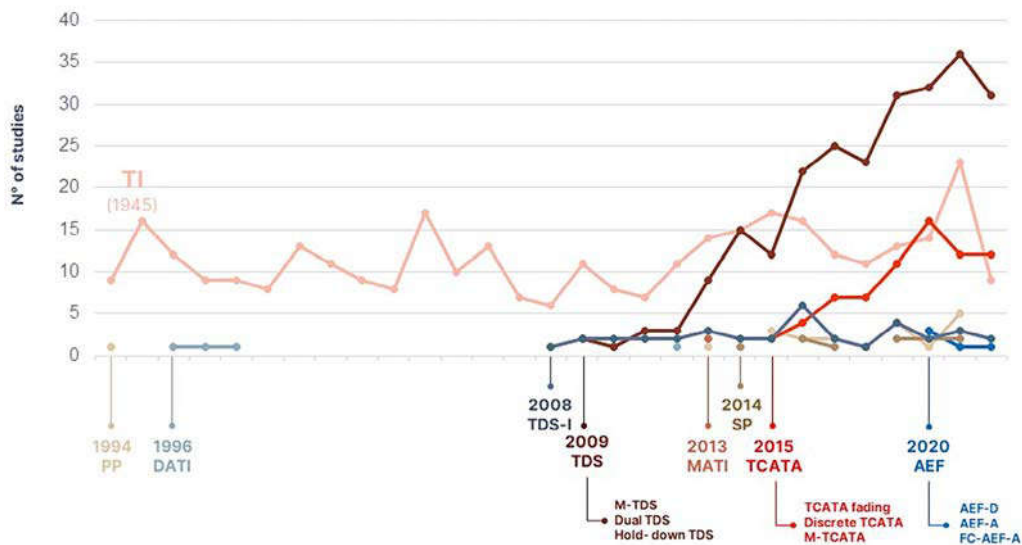


Fig. 1. Number of articles published by year and type of temporal method used.

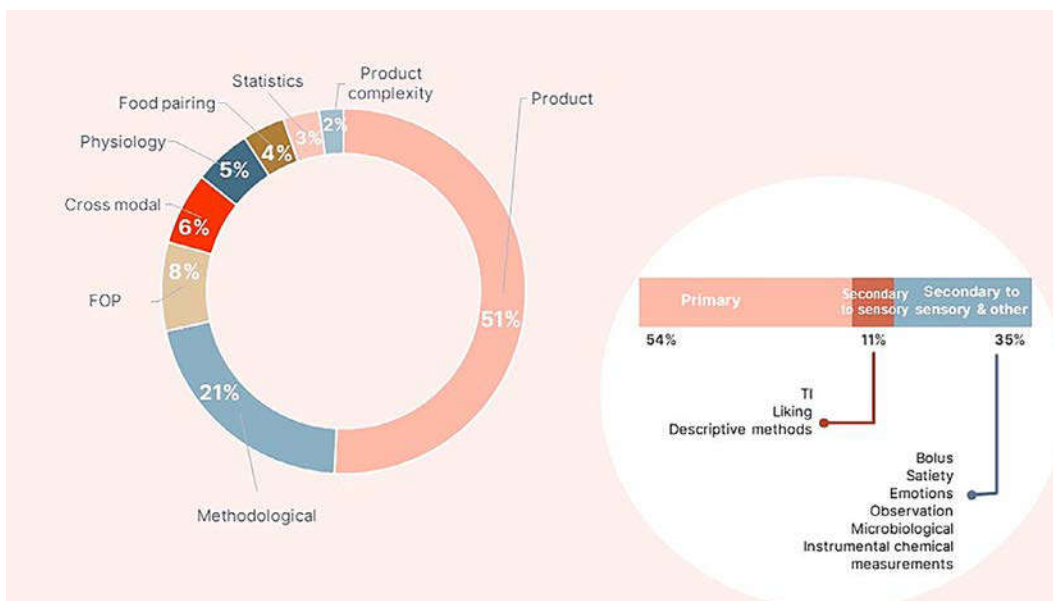


Fig. 2. Research aim when using temporal methods.

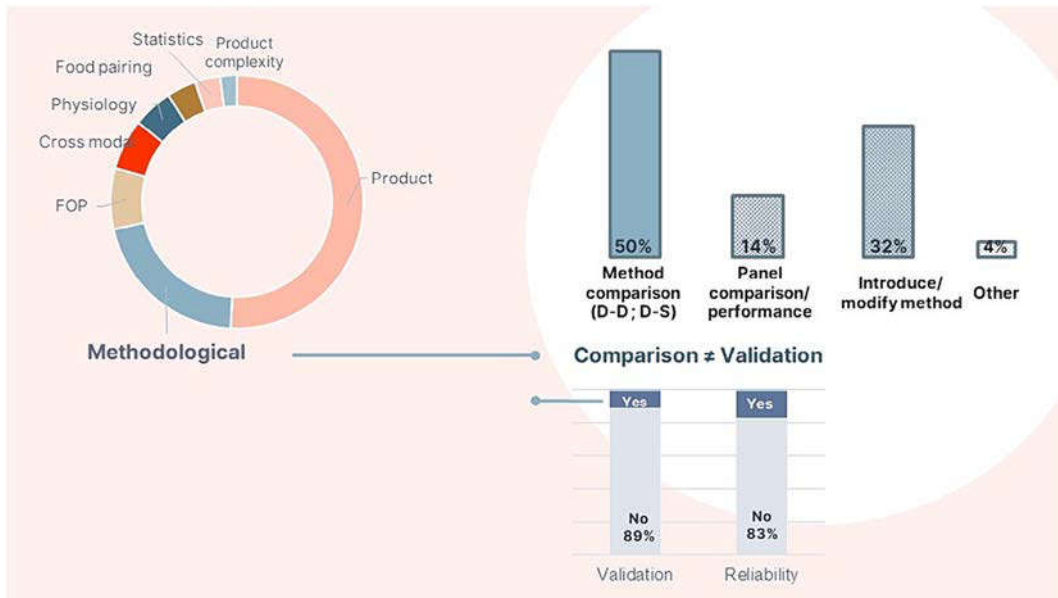


Fig. 3. Aim of research papers analyzing temporal methods.

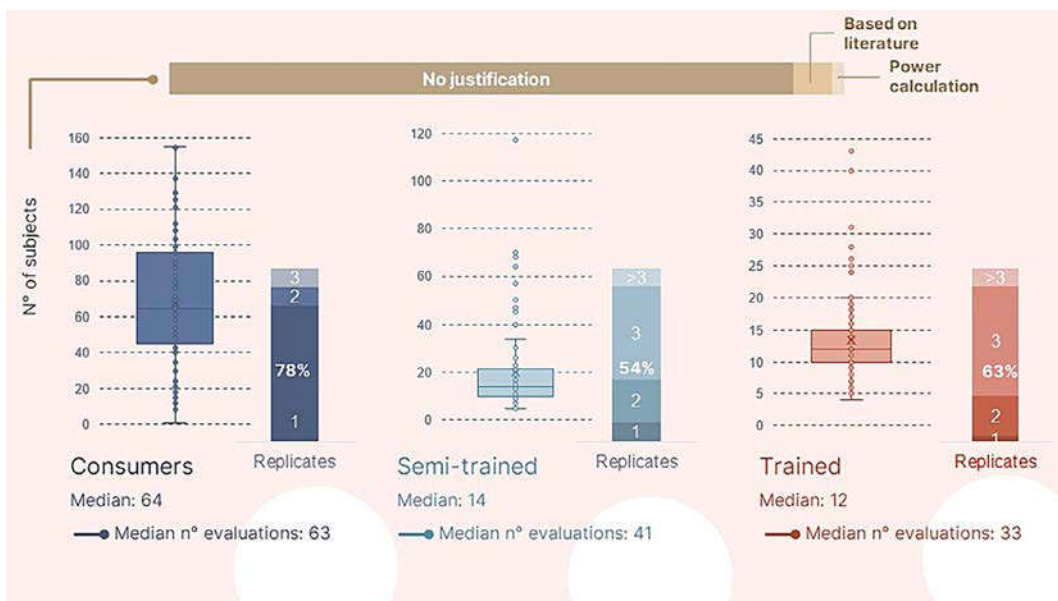


Fig. 4. Panel size and number of replicates in research articles using temporal methods.

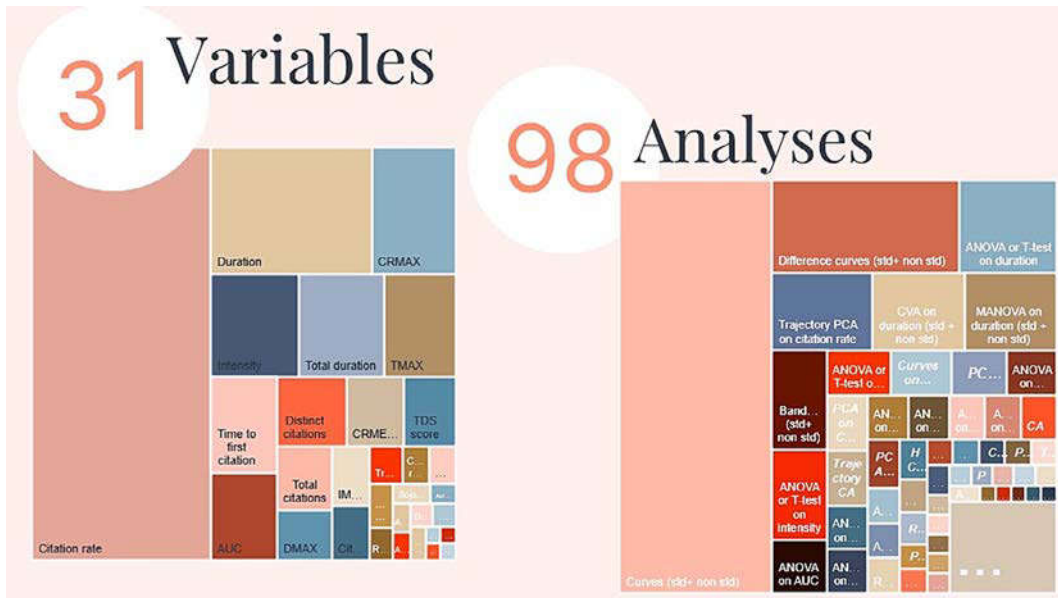


Fig. 5. Variables and types of analyses used in research papers on temporal methods.

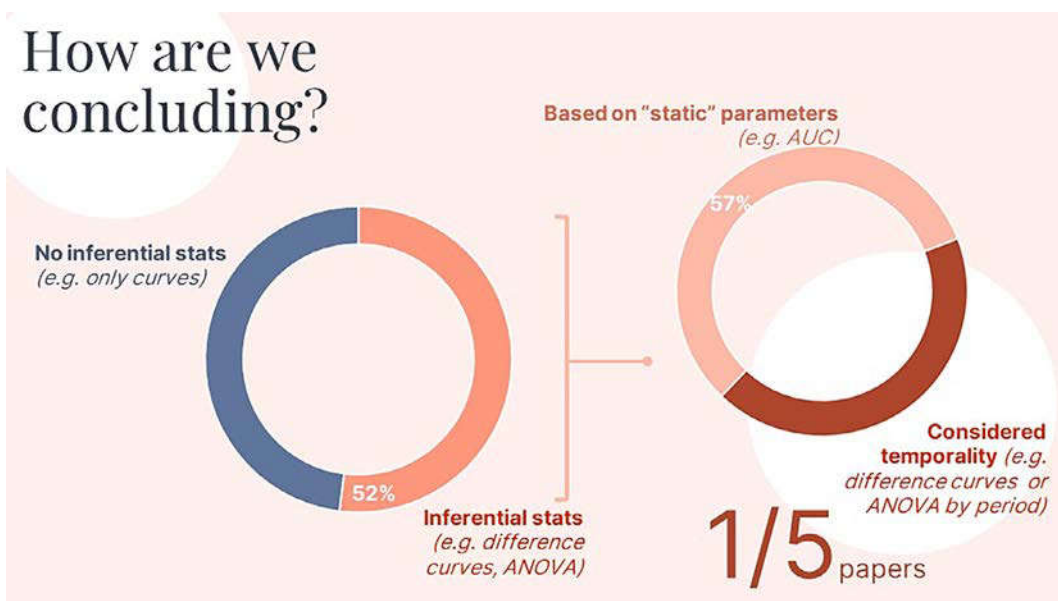


Fig. 6. Type of analyses used to conclude in research papers using temporal methods.

## CRediT authorship contribution statement

**M.V. Galmarini:** Writing – review & editing, Writing – original draft, Visualization, Validation, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **M. Visalli:** Validation, Methodology, Investigation, Formal analysis, Data curation.

## Data availability

Data will be made available on request.

## Acknowledgments

We would like to thank the Pangborn Scientific Committee for giving us the opportunity for presenting this content in the 2023 edition of the symposium.

## Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

## Declaration of interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Further reading

## Main references

- [1] M. Visalli, M.V. Galmarini, Multi-attribute temporal descriptive methods in sensory analysis applied in food science: protocol for a scoping review, *PLoS One* 17 (7) (2022), e0270969, <https://doi.org/10.1371/journal.pone.0270969>.
- [2] M. Visalli, M.V. Galmarini, Multi-attribute temporal descriptive methods in sensory analysis applied in food science: a systematic scoping review, *Compr. Rev. Food Sci. Food Saf.* 23 (2024) 1–45.

## Complete list of all the publications included in the scoping review:

- [3] J. Adams, A. Williams, N. Lancaster, M. Foley, Advantages and uses of check-all-that-apply response compared to traditional scaling of attributes for salty snacks. *7th Pangborn Sensory Science Symposium. Minneapolis, USA, 12–16 August, 2007*, 2007.
- [4] M.G. Aguayo-Mendoza, G. Chatonidi, B. Piqueras-Fiszman, M. Stieger, Linking oral processing behavior to bolus properties and dynamic sensory perception of processed cheeses with bell pepper pieces, *Food Qual. Prefer.* 88 (2021), <https://doi.org/10.1016/j.foodqual.2020.104084>.
- [5] M.G. Aguayo-Mendoza, E.F. Martinez-Almaguer, B. Piqueras-Fiszman, M. Stieger, Differences in oral processing behavior of consumers varying in age, gender and ethnicity lead to changes in bolus properties but only to small differences in dynamic texture perception of sausages, *Food Funct.* 11 (11) (2020) 10022–10032, <https://doi.org/10.1039/D0FO01835J>.
- [6] A. Agudelo, P. Varela, S. Fiszman, Methods for a deeper understanding of the sensory perception of fruit fillings, *Food Hydrocoll.* 46 (2015) 160–171, <https://doi.org/10.1016/j.foodhyd.2014.12.024>.
- [7] H. Aguinis, M. Vassar, C. Wayant, On reporting and interpreting statistical significance and p values in medical research, *BMJ Evid. Based Med.* 26 (2) (2021) 39, <https://doi.org/10.1136/bmjebm-2019-111264>.
- [8] H. Akdag, Identifying quality criteria of a scientific research adopted by academic community: a case study, *Int. J. Eurasia Soc. Sci.* 10 (36) (2019) 516–527, <https://doi.org/10.35826/IJOESS.2479>.
- [9] A. Albert, A. Salvador, P. Schlich, S. Fiszman, Comparison between temporal dominance of sensations (TDS) and key-attribute sensory profiling for evaluating solid food with contrasting textural layers: fish sticks, *Food Qual. Prefer.* 24 (1) (2012) 111–118, <https://doi.org/10.1016/j.foodqual.2011.10.003>.
- [10] F. Alcaire, L. Antúnez, L. Vidal, S. Zorn, A. Giménez, J.C. Castura, G. Ares, Comparison of static and dynamic sensory product characterizations based on check-all-that-apply questions with consumers, *Food Res. Int.* 97 (2017) 215–222, <https://doi.org/10.1016/j.foodres.2017.04.012>.
- [11] C. Anandharamakrishnan, P. Sethupathy, S.K. Sivakamasundari, J.A. Moses, Effect of varietal differences on the oral processing behavior and bolus properties of cooked rice, *Int. J. Food Eng.* 17 (3) (2021) 177–188, <https://doi.org/10.1515/IJFE-2020-0097>.
- [12] A.C. Andrade, M.B. Martins, J.F. Rodrigues, S.B. Coelho, A.C.M. Pinheiro, S.C. Bastos, Effect of different quantities of miracle fruit on sour and bitter beverages, *LWT* 99 (2019) 89–97, <https://doi.org/10.1016/j.lwt.2018.09.054>.
- [13] L. Antúnez, A. Giménez, L. Vidal, G. Ares, Partial replacement of NaCl with KCl in bread: Effect on sensory characteristics and consumer perception, *J. Sens. Stud.* 33 (5) (2018), <https://doi.org/10.1111/JOSS.12441>.
- [14] I.A.M. Appelqvist, A.A.M. Poelman, M. Cochet-Broch, C.M. Delahunty, Impact of model fat emulsions on sensory perception using repeated spoon to spoon ingestion, *Physiol. Behav.* 160 (2016) 80–86, <https://doi.org/10.1016/j.physbeh.2016.03.035>.
- [15] G. Ares, F. Alcaire, L. Antúnez, L. Vidal, A. Giménez, J.C. Castura, Identification of drivers of (dis)liking based on dynamic sensory profiles: comparison of Temporal Dominance of Sensations and Temporal Check-all-that-apply, *Food Res. Int.* 92 (2017) 79–87, <https://doi.org/10.1016/j.foodres.2016.12.016>.
- [16] G. Ares, J.C. Castura, L. Antúnez, L. Vidal, A. Giménez, B. Coste, A. Picallo, M.K. Beresford, S.L. Chheang, S.R. Jaeger, Comparison of two TCATA variants for dynamic sensory characterization of food products, *Food Qual. Prefer.* 54 (2016) 160–172, <https://doi.org/10.1016/j.foodqual.2016.07.006>.
- [17] G. Ares, S.R. Jaeger, L. Antúnez, L. Vidal, A. Giménez, B. Coste, A. Picallo, J.C. Castura, Comparison of TCATA and TDS for dynamic sensory characterization of food products, *Food Res. Int.* 78 (2015) 148–158, <https://doi.org/10.1016/j.foodres.2015.10.023>.
- [18] G. Ares, A. Tárrega, L. Izquierdo, S.R. Jaeger, Investigation of the number of consumers necessary to obtain stable sample and descriptor configurations from check-all-that-apply (CATA) questions, *Food Qual. Prefer.* 31 (1) (2014) 135–141, <https://doi.org/10.1016/j.foodqual.2013.08.012>.
- [19] J. Aschemann-Witzel, G. Ares, J. Thøgersen, E. Monteleone, A sense of sustainability? – How sensory consumer science can contribute to sustainable development of the food sector, *Trends Food Sci. Technol.* 90 (2019) 180–186, <https://doi.org/10.1016/j.tifs.2019.02.021>.
- [20] B.E. Auriema, F.J. Correa, R. Silva, P.T.S. Soares, A.L. Lima, V.A.S. Vidal, R.S.L. Raices, M.A.R. Pollonio, R.H. Luchese, E.A. Esmerino, S.P. Mathias, Fat replacement by green banana biomass: impact on the technological, nutritional and dynamic sensory profiling of chicken mortadella, *Food Res. Int.* 152 (2022), <https://doi.org/10.1016/j.foodres.2021.110890>.
- [21] A.K. Baker, J.C. Castura, C.F. Ross, Temporal check-all-that-apply characterization of Syrah Wine, *J. Food Sci.* 81 (6) (2016) S1521–S1529, <https://doi.org/10.1111/1750-3841.13328>.
- [22] M.S.G. de Barbosa, J.S. Francisco, M.B. dos Santos Scholz, C.S.G. Kitzberger, M.T. de Benassi, Dynamics of sensory perceptions in arabica coffee brews with different roasting degrees, *J. Culinary Sci. Technol.* 17 (5) (2019) 453–464, <https://doi.org/10.1080/15428052.2018.1489321>.
- [23] S. Barker, M.B. McSweeney, Sensory characterization of yellow pea and ground chicken hybrid meat burgers using static and dynamic methodologies, *J. Food Sci.* 87 (12) (2022) 5390–5401, <https://doi.org/10.1111/1750-3841.16380>.
- [24] N.N. Batista, C.L. Ramos, D.R. Dias, A.C.M. Pinheiro, R.F. Schwan, The impact of yeast starter cultures on the microbial communities and volatile compounds in cocoa fermentation and the resulting sensory attributes of chocolate, *J. Food Sci. Technol.* 53 (2) (2016) 1101–1110, <https://doi.org/10.1007/S13197-015-2132-5>.
- [25] D. Beaton, M. Meyners, Powerful visualization of product-attribute associations for temporal data, *Food Qual. Prefer.* 79 (2020), 103572, <https://doi.org/10.1016/j.foodqual.2018.09.002>.
- [26] R.M. Bemeito, J.F. Rodrigues, J.G.E. Silva, L.R. Abreu, Temporal dominance of sensations sensory profile and drivers of liking of artisanal Minas cheese produced in the region of Serra da Canastra, Brazil, *J. Dairy Sci.* 99 (10) (2016) 7886–7897, <https://doi.org/10.3168/JDS.2016-11056>.
- [27] I. Berget, J.C. Castura, G. Ares, T. Næs, P. Varela, Exploring the common and unique variability in TDS and TCATA data – a comparison using canonical correlation and orthogonalization, *Food Qual. Prefer.* 79 (2020), 103790, <https://doi.org/10.1016/j.foodqual.2019.103790>.
- [28] D. Bikos, G. Samaras, P. Cann, M. Masen, Y. Hardalupas, M.N. Charalambides, C. Hartmann, J. German, J. Vieira, Effect of structure on the mechanical and physical properties of chocolate considering time scale phenomena occurring during oral processing, *Food Struct.* 31 (2022), <https://doi.org/10.1016/j.foos.2021.100244>.
- [29] C. Bord, D. Guerinon, A. Lebecque, Application of two sensory methods to investigate the impact of heating on the flavor perception of a French blue cheese, *J. Sens. Stud.* 34 (5) (2019), <https://doi.org/10.1111/JOSS.12509>.
- [30] M. Borgogno, C. Dinnella, V. Iaconisi, R. Fusi, C. Scarpaleggia, A. Schiavone, E. Monteleone, L. Gasco, G. Parisi, Inclusion of *Hermetia illucens* larvae meal on rainbow trout (*Oncorhynchus mykiss*) feed: effect on sensory profile according to static and dynamic evaluations, *J. Sci. Food Agric.* 97 (10) (2017) 3402–3411, <https://doi.org/10.1002/JSFA.8191>.
- [31] R. Bouteille, S. Cordelle, C. Laval, C. Toumier, B. Lecanu, H. This, P. Schlich, Sensory exploration of the freshness sensation in plain yoghurts and yoghurt-like products, *Food Qual. Prefer.* 30 (2) (2013) 282–292, <https://doi.org/10.1016/j.foodqual.2013.06.012>.
- [32] A. Braghieri, N. Piazzolla, F. Galgano, N. Condelli, G. De Rosa, F. Napolitano, Effect of preservative addition on sensory and dynamic profile of Lucanian dry-sausages as assessed by quantitative descriptive analysis and temporal dominance of sensations, *Meat Sci.* 122 (2016) 68–75, <https://doi.org/10.1016/j.meatsci.2016.07.020>.
- [33] J. Brock, “A love letter to your future self”: What scientists need to know about FAIR data. *Nature Index*, <https://www.nature.com/nature-index/news/what-scientists-need-to-know-about-fair-data>; 2019.
- [34] F. Bruzzese, G. Ares, A. Giménez, Temporal aspects of yoghurt texture perception, *Int. Dairy J.* 29 (2) (2013) 124–134, <https://doi.org/10.1016/j.idairyj.2012.10.012>.

- [35] S.P. Bull, Y. Hong, V.V. Khutoryanskiy, J.K. Parker, M. Faka, L. Methven, Whey protein mouth drying influenced by thermal denaturation, *Food Qual. Prefer.* 56 (2017) 233–240, <https://doi.org/10.1016/J.FOODQUAL.2016.03.008>.
- [36] M.L. Caltabiano, J. Shellshar, Palatability versus healthiness as determinants of food preferences in young adults: a comparison of nomothetic and idiographic analytic approaches, *Aust. N. Z. J. Public Health* 22 (5) (1998) 547–551, <https://doi.org/10.1111/J.1467-842X.1998.TB01436.X>.
- [37] A.K.F.I. Câmara, V.A.S. Vidal, M. Santos, O.D. Bernardinelli, E. Sabadini, M.A.R. Pollonio, Reducing phosphate in emulsified meat products by adding chia (*Salvia hispanica* L.) mucilage in powder or gel format: A clean label technological strategy, *Meat Sci.* 163 (2020), <https://doi.org/10.1016/J.MEATSCI.2020.108085>.
- [38] H. Cardot, G. Lecuelle, P. Schlich, M. Visalli, Estimating finite mixtures of semi-Markov chains: an application to the segmentation of temporal sensory data, *J. R. Stat. Soc.: Ser. C: Appl. Stat.* 68 (5) (2019) 1281–1303.
- [39] E. Carrillo, L. Laguna, C. Arancibia, A. Tárrega, Rescuing Flavor identity and dynamic perception in Puréed dishes; a restructuring solution for the Puréed diet, *Foods* 10 (4) (2021), <https://doi.org/10.3390/FOODS10040905>.
- [40] J.C. Castura, Investigating temporal sensory data via a graph theoretic approach, *Food Qual. Prefer.* 79 (2020), <https://doi.org/10.1016/J.FOODQUAL.2019.103787>.
- [41] J.C. Castura, D.N. Rutledge, C.F. Ross, T. Naes, Discriminability and uncertainty in principal component analysis (PCA) of temporal check-all-that-apply (TCATA) data, *Food Qual. Prefer.* 96 (2022), <https://doi.org/10.1016/J.FOODQUAL.2021.104370>.
- [42] John C. Castura, Dynamics of Consumer Perception. *Methods in Consumer Research, Volume 1: New Approaches to Classic Methods*, 2018 211–240, <https://doi.org/10.1016/B978-0-08-102089-0.00009-1>.
- [43] John C. Castura, A.K. Baker, C.F. Ross, Using contrails and animated sequences to visualize uncertainty in dynamic sensory profiles obtained from temporal check-all-that-apply (TCATA) data, *Food Qual. Prefer.* 54 (2016) 90–100, <https://doi.org/10.1016/J.FOODQUAL.2016.06.011>.
- [44] John C. Castura, M. Li, Using TDS dyads and other dominance sequences to characterize products and investigate liking changes, *Food Qual. Prefer.* 47 (2016) 109–121, <https://doi.org/10.1016/J.FOODQUAL.2015.06.019>.
- [45] John C. Castura, L. Antúnez, A. Giménez, G. Ares, Temporal Check-All-That-Apply (TCATA): a novel dynamic method for characterizing products, *Food Qual. Prefer.* 47 (2016) 79–90.
- [46] D. Chadha, N. Hamid, K. Kantono, M. Marsan, Changes in temporal sensory profile, liking, satiety, and postconsumption attributes of yogurt with natural sweeteners, *J. Food Sci.* 87 (7) (2022) 3190–3206, <https://doi.org/10.1111/1750-3841.16224>.
- [47] M. Charles, I. Endrizzi, E. Aprea, J. Zambanini, E. Betta, F. Gasperi, Dynamic and static sensory methods to study the role of aroma on taste and texture: a multisensory approach to apple perception, *Food Qual. Prefer.* 62 (2017) 17–30, <https://doi.org/10.1016/J.FOODQUAL.2017.06.014>.
- [48] M. Charles, A. Romano, S. Yener, M. Barnabà, L. Navarini, T.D. Märk, F. Biasoli, F. Gasperi, Understanding flavour perception of espresso coffee by the combination of a dynamic sensory method and in-vivo nosespace analysis, *Food Res. Int.* 69 (2015) 9–20, <https://doi.org/10.1016/J.FOODRES.2014.11.036>.
- [49] J.N. Cheong, K.D. Foster, M.P. Morgenstern, J.M.V. Grigor, J.E. Bronlund, S.C. Hutchings, D.I. Hedderley, The application of temporal dominance of sensations (TDS) for oral processing studies: an initial investigation, *J. Texture Stud.* 45 (6) (2014) 409–419, <https://doi.org/10.1111/JTXS.12091>.
- [50] D. Ciceri, E. Aprea, L. Menghi, I. Endrizzi, F. Gasperi, Variability in the temporal perception of polyphenol-related sensations in extra virgin olive oil and impact on flavor perception, *Food Qual. Prefer.* 93 (2021), <https://doi.org/10.1016/J.FOODQUAL.2021.104249>.
- [51] M. Cliff, H. Heymann, Development and use of time-intensity methodology for sensory evaluation: a review, *Food Res. Int.* 26 (5) (1993) 375–385, [https://doi.org/10.1016/0963-9969\(93\)90081-S](https://doi.org/10.1016/0963-9969(93)90081-S).
- [52] S. Cordelle, A. Redl, P. Schlich, Sensory acceptability of new plant protein meal substitutes, *Food Qual. Prefer.* 98 (2022), <https://doi.org/10.1016/J.FOODQUAL.2021.104508>.
- [53] S.C. Corrêa Simioni, M.N. Ribeiro, V.R. de Souza, C.A. Nunes, A.C.M. Pinheiro, Multiple-sip temporal dominance of sensations associated with acceptance test: a study on special beers, *J. Food Sci. Technol.* 55 (3) (2018) 1164–1174, <https://doi.org/10.1007/S13197-018-3032-2>.
- [54] E. Correia, E. Amorim, A. Vilela, Structural equation modeling (SEM) and temporal dominance of sensations (TDS) in the evaluation of DOC Douro red wine's sensory profile, *Foods* 11 (8) (2022), <https://doi.org/10.3390/FOODS11081168>.
- [55] A. Cosson, I. Souchon, J. Richard, N. Descamps, S.E. Anne, Using multiple sensory profiling methods to gain insight into temporal perceptions of pea protein-based formulated foods, *Foods* 9 (8) (2020), <https://doi.org/10.3390/FOODS9080969>.
- [56] L.T. Crepalde, M.C.T.R. Vidigal, J.D.S. de Carneiro, V.P.R. Minim, Integration of the optimized descriptive profile and temporal dominance of sensations methodologies, *J. Sens. Stud.* 36 (3) (2021), <https://doi.org/10.1111/JOSS.12651>.
- [57] C. Criado, C. Chaya, V. Fernández-Ruiz, M.D. Álvarez, B. Herranz, M.Á. Pozo-Bayón, Effect of saliva composition and flow on inter-individual differences in the temporal perception of retronasal aroma during wine tasting, *Food Res. Int.* 126 (2019), <https://doi.org/10.1016/J.FOODRES.2019.108677>.
- [58] T.L.T. Da Silva, V.R. De Souza, A.C.M. Pinheiro, C.A. Nunes, T.V.M. Freire, Equivalence salting and temporal dominance of sensations analysis for different sodium chloride substitutes in cream cheese, *Int. J. Dairy Technol.* 67 (1) (2014) 31–38, <https://doi.org/10.1111/1471-0307.12100>.
- [59] M.D. de Lavergne, C. Tournier, D. Bertrand, C. Salles, F. Van de Velde, M. Stieger, Dynamic texture perception, oral processing behaviour and bolus properties of emulsion-filled gels with and without contrasting mechanical properties, *Food Hydrocoll.* 52 (2016) 648–660, <https://doi.org/10.1016/J.FOODHYD.2015.07.022>.
- [60] C. De Loubens, M. Panouillé, A. Saint-Eve, I. Délérís, I.C. Trélea, I. Souchon, Mechanistic model of in vitro salt release from model dairy gels based on standardized breakdown test simulating mastication, *J. Food Eng.* 105 (1) (2011) 161–168, <https://doi.org/10.1016/J.JFOODENG.2011.02.020>.
- [61] A.C. de Medeiros, E.R. Tavares Filho, H.M.A. Bolini, Temporal profile of low calorie lactose-free ice cream chocolate flavor: temporal dominance sensation and multiple time-intensity analysis, *J. Food Sci. Technol.* 58 (8) (2021) 3164–3173, <https://doi.org/10.1007/S13197-020-04819-2>.
- [62] M.M. de Oliveira Paula, A.A. Massingue, A.P.R. de Moura, J. de Deus Souza Carneiro, A. de Lemos Souza Ramos, E.M. Ramos, Temporal dominance of sensations and check-all-that-apply analysis of restructured cooked hams elaborated with different salt content and pork quality meats, *Food Sci. Technol. Int.* 27 (1) (2021) 73–83, <https://doi.org/10.1177/1082013220932355>.
- [63] D.G.C. De Paula, C.M. Vasconcelos, A.F. Pereira, A.L. Da Cunha Quintão, J.O. Chaves, P.M. Parreiras, C.C. Menezes, Maceration time over antioxidant activity, volatile compounds and temporal dominant sensation of fermented jabuticaba, *Food Sci. Technol. (Brazil)* 42 (2022), <https://doi.org/10.1590/FST.43221>.
- [64] V.R. De Souza, T.V.M. Freire, C.G. Saraiva, De Deus Souza Carneiro, J., Pinheiro, A. C. M., & Nunes, C. A., Salt equivalence and temporal dominance of sensations of different sodium chloride substitutes in butter, *J. Dairy Res.* 80 (3) (2013) 319–325, <https://doi.org/10.1017/S0022029913000204>.
- [65] K.C. Deegan, N. Heikintalo, T. Ritvanen, T. Putkonen, J. Rekonen, P.L.H. McSweeney, T. Alatossava, H. Tuorila, Effects of low-pressure homogenisation on the sensory and chemical properties of Emmental cheese, *Innov. Food Sci. Emerg. Technol.* 19 (2013) 104–114, <https://doi.org/10.1016/J.IFSET.2013.04.008>.
- [66] R. del Barrio-Galán, M. Medel-Marabolí, Á. Peña-Neira, Effect of different ageing techniques on the polysaccharide and phenolic composition and sensorial characteristics of Chardonnay white wines fermented with different selected *Saccharomyces Cerevisiae* yeast strains, *Eur. Food Res. Technol.* 242 (7) (2016) 1069–1085, <https://doi.org/10.1007/S00217-015-2612-X>.
- [67] I. Délérís, A. Saint-Eve, Y. Guo, P. Lieben, M.L. Cypriani, N. Jacquet, P. Brunerie, I. Souchon, Impact of swallowing on the dynamics of aroma release and perception during the consumption of alcoholic beverages, *Chem. Senses* 36 (8) (2011) 701–713, <https://doi.org/10.1093/CHEMSE/BJR038>.
- [68] T. Delompré, L. Lenoir, C. Martin, L. Briand, C. Salles, Characterizing the dynamic taste and retro-nasal aroma properties of oral nutritional supplements using temporal dominance of sensation and temporal check-all-that-apply methods, *Foods* 9 (10) (2020), <https://doi.org/10.3390/FOODS9101456>.
- [69] M. Demeter, A. Jele, Z.B. Major, The international development of open access publishing: a comparative empirical analysis over seven world regions and nine academic disciplines, *Publ. Res. Q.* 37 (3) (2021) 364–383, <https://doi.org/10.1007/S12109-021-09814-9/FIGURES/4>.
- [70] A. den Boer, S. Boesveldt, J. Ben Lawlor, How sweetness intensity and thickness of an oral nutritional supplement affects intake and satiety, *Food Qual. Prefer.* 71 (2019) 406–414, <https://doi.org/10.1016/J.FOODQUAL.2018.08.009>.
- [71] E. Derks, S. Ramnarain, T. Zhang, R. van Doorn, M. Nijmeijer, M. van den Berg, Visualizing dynamic (after)taste effects by means of time-discrete TCATA data analysis, *J. Sens. Stud.* 37 (3) (2022), <https://doi.org/10.1111/JOSS.12737>.
- [72] M. Devezeaux de Lavergne, M. van Delft, F. van de Velde, M.A.J.S. van Boekel, M. Stieger, Dynamic texture perception and oral processing of semi-solid food gels: Part 1: Comparison between QDA, progressive profiling and TDS, *Food Hydrocoll.* 43 (2015) 207–217, <https://doi.org/10.1016/J.FOODHYD.2014.05.020>.
- [73] Devezeaux de Lavergne, Derks Marine, J. A. M., Ketel, E. C., de Wijk, R. A., & Stieger, M., Eating behaviour explains differences between individuals in dynamic texture perception of sausages, *Food Qual. Prefer.* 41 (2015) 189–200, <https://doi.org/10.1016/J.FOODQUAL.2014.12.006>.
- [74] Devezeaux de Lavergne, Van Marine, F. de Velde, M. Stieger, Bolus matters: the influence of food oral breakdown on dynamic texture perception, *Food Funct.* 8 (2) (2017) 464–480, <https://doi.org/10.1039/C6FO01005A>.
- [75] R. Di Monaco, N.A. Miele, S. Volpe, D. Picone, S. Cavella, Temporal Sweetness Profile of MNEI and Comparison with Commercial Sweeteners, *J. Sens. Stud.* 29 (6) (2014) 385–394, <https://doi.org/10.1111/JOSS.12119>.
- [76] Rossella Di Monaco, A. Galiñanes Plaza, N.A. Miele, D. Picone, S. Cavella, Temporal sweetness profile of MNEI protein in gelled model systems, *J. Sens. Stud.* 31 (5) (2016) 382–392, <https://doi.org/10.1111/JOSS.12222>.
- [77] Rossella di Monaco, N.A. Miele, S. Volpe, P. Masi, S. Cavella, Temporal dominance of sensations and dynamic liking evaluation of polenta sticks, *Br. Food J.* 118 (3) (2016) 749–760, <https://doi.org/10.1108/BFJ-07-2015-0236>.
- [78] Rossella Di Monaco, C. Su, P. Masi, S. Cavella, Temporal dominance of sensations: a review, *Trends Food Sci. Technol.* 38 (2) (2014) 104–112.
- [79] C. Dietz, D. Cook, Q. Yang, C. Wilson, R. Ford, A TCATA by modality approach to study the multisensory temporal profile of hop bitter and flavour products applied in lager, *Food Qual. Prefer.* 97 (2022), 104470, <https://doi.org/10.1016/J.FOODQUAL.2021.104470>.
- [80] C. Dietz, Q. Yang, R. Ford, The impact of time standardising TCATA by modality data on the multisensory profile of beer, *Food Qual. Prefer.* 98 (2022), <https://doi.org/10.1016/J.FOODQUAL.2021.104506>.
- [81] G.B. Dijksterhuis, J.R. Piggott, Dynamic methods of sensory analysis, *Trends Food Sci. Technol.* 11 (8) (2000) 284–290, [https://doi.org/10.1016/S0924-2244\(01\)00020-6](https://doi.org/10.1016/S0924-2244(01)00020-6).
- [82] C. Dinnella, C. Masi, T. Naes, E. Monteleone, A new approach in TDS data analysis: a case study on sweetened coffee, *Food Qual. Prefer.* 30 (1) (2013) 33–46, <https://doi.org/10.1016/J.FOODQUAL.2013.04.006>.
- [83] C. Dinnella, C. Masi, G. Zoboli, E. Monteleone, Sensory functionality of extra-virgin olive oil in vegetable foods assessed by Temporal Dominance of Sensations and Descriptive Analysis, *Food Qual. Prefer.* 26 (2) (2012) 141–150, <https://doi.org/10.1016/J.FOODQUAL.2012.04.013>.

- [84] C. Dinnella, L. Pierguidi, S. Spinelli, M. Borgogno, T. Gallina Toschi, S. Predieri, G. Lavezzi, F. Trapani, M. Tura, M. Magli, A. Bendini, E. Monteolone, Remote testing: sensory test during Covid-19 pandemic and beyond, *Food Qual. Prefer.* 96 (2022), <https://doi.org/10.1016/J.FOODQUAL.2021.104437>.
- [85] I. Djekic, J. Ilic, J. Chen, R. Djekic, B.G. Solowiej, D. Vujadinović, I. Tomasevic, Analysis of pungency sensation effects from an oral processing, sensorial and emotions detection perspective—case study with grilled pork meat, *Appl. Sci. (Switzerland)* 11 (21) (2021), <https://doi.org/10.3390/APP112110459>.
- [86] I. Djekic, J. Ilic, J.M. Lorenzo, I. Tomasevic, How do culinary methods affect quality and oral processing characteristics of pork ham? *J. Texture Stud.* 52 (1) (2021) 36–44, <https://doi.org/10.1111/JTXX.12557>.
- [87] I.V. Djekic, J.G. Ilic, B.G. Solowiej, R.I. Djekic, I.B. Tomasevic, Application of food mechanics and oral processing in modelling first bite of grilled meat, *J. Food Qual.* 2022 (2022), <https://doi.org/10.1155/2022/9176628>.
- [88] M. Dong, Y.Y. Zhang, X.H. Huang, R. Xin, X.P. Dong, K. Konno, B.W. Zhu, I. Fisk, L. Qin, Dynamic sensations of fresh and roasted salmon (*Salmo salar*) during chewing, *Food Chem.* 368 (2022), <https://doi.org/10.1016/J.FOODCHEM.2021.130844>.
- [89] M. Doyennette, M.G. Aguayo-Mendoza, A.M. Williamson, S.I.F.S. Martins, M. Stieger, Capturing the impact of oral processing behaviour on consumption time and dynamic sensory perception of ice creams differing in hardness, *Food Qual. Prefer.* 78 (2019), <https://doi.org/10.1016/J.FOODQUAL.2019.103721>.
- [90] L.M. Duizer, K. Bloom, C.J. Findlay, Dual-attribute time-intensity measurement of sweetness and peppermint perception of chewing gum, *J. Food Sci.* 61 (3) (1996) 636–638, <https://doi.org/10.1111/J.1365-2621.1996.TB13175.X>.
- [91] L.M. Duizer, K. Bloom, C.J. Findlay, Dual-attribute time-intensity sensory evaluation: A new method for temporal measurement of sensory perceptions, *Food Qual. Prefer.* 8 (4) (1997) 261–269, [https://doi.org/10.1016/S0950-3293\(96\)00052-3](https://doi.org/10.1016/S0950-3293(96)00052-3).
- [92] A. Dupas de Matos, M. Marangon, M. Magli, M. Cianciabella, S. Predieri, A. Curioni, S. Vincenzi, Sensory characterization of cucumbers pickled with verjuice as novel acidifying agent, *Food Chem.* 286 (2019) 78–86, <https://doi.org/10.1016/J.FOODCHEM.2019.01.216>.
- [93] M. Emorine, C. Septier, C. Martin, S. Cordelle, E. Sémon, T. Thomas-Danguin, C. Salles, Salt and aroma compound distributions influence flavour release and temporal perception while eating hot-served flans, *Molecules* 26 (5) (2021), <https://doi.org/10.3390/MOLECULES26051300>.
- [94] E.A. Esmerino, J.C. Castura, J.P. Ferraz, E.R. Tavares Filho, R. Silva, A.G. Cruz, M.Q. Freitas, H.M.A. Bolini, Dynamic profiling of different ready-to-drink fermented dairy products: a comparative study using Temporal Check-All-That-Apply (TCATA), Temporal Dominance of Sensations (TDS) and Progressive Profile (PP), *Food Res. Int.* 101 (2017) 249–258, <https://doi.org/10.1016/J.FOODRES.2017.09.012>.
- [95] I. Etaio, S. Meillon, F.J. Pérez-Elortondo, P. Schlich, Dynamic sensory description of Rioja Alavesa red wines made by different winemaking practices by using Temporal Dominance of Sensations, *J. Sci. Food Agric.* 96 (10) (2016) 3492–3499, <https://doi.org/10.1002/JSFA.7533>.
- [96] S.R. Evangelista, M.G. da Cruz Pedrozo Miguel, C. de Souza Cordeiro, C.F. Silva, A.C. Marques Pinheiro, R.F. Schwan, Inoculation of starter cultures in a semi-dry coffee (Coffea arabica) fermentation process, *Food Microbiol.* 44 (2014) 87–95, <https://doi.org/10.1016/J.FM.2014.05.013>.
- [97] S.R. Evangelista, M.G.C.P. da Miguel, C.F. Silva, A.C.M. Pinheiro, R.F. Schwan, Microbiological diversity associated with the spontaneous wet method of coffee fermentation, *Int. J. Food Microbiol.* 210 (2015) 102–112, <https://doi.org/10.1016/J.IJFOODMICRO.2015.06.008>.
- [98] S.R. Evangelista, C.F. Silva, M.G.P.C. da Miguel, C.S. de Cordeiro, A.C.M. Pinheiro, W.F. Duarte, R.F. Schwan, Improvement of coffee beverage quality by using selected yeasts strains during the fermentation in dry process, *Food Res. Int.* 61 (2014) 183–195, <https://doi.org/10.1016/J.FOODRES.2013.11.033>.
- [99] A.C. Feltrin, V.R. De Souza, C.G. Saraiva, C.A. Nunes, A.C.M. Pinheiro, Sensory study of different sodium chloride substitutes in aqueous solution, *Int. J. Food Sci. Technol.* 50 (3) (2015) 730–735, <https://doi.org/10.1111/IJFS.12670>.
- [100] G. Fiches, A. Saint Eve, S. Jourden, I. Déleris, P. Brunerie, I. Souchon, Temporality of perception during the consumption of French grape brandies with different aging times in relation with aroma compound release, *Flavour Fragr. J.* 31 (1) (2016) 31–40, <https://doi.org/10.1002/FFJ.3265>.
- [101] D.A. Fife, J.L. Rodgers, Understanding the exploratory/confirmatory data analysis continuum: moving beyond the “replication crisis”, *Am. Psychol.* 77 (3) (2021) 453–466, <https://doi.org/10.1037/AMP0000886>.
- [102] S. Fiszman, A. Tarrega, The dynamics of texture perception of hard solid food: a review of the contribution of the temporal dominance of sensations technique, *J. Texture Stud.* 49 (2) (2018) 202–212, <https://doi.org/10.1111/JTXX.12273>.
- [103] C.G. Forde, Sensory science: from measuring perception to understanding ingestive behavior, *Reference Module in Food Science*, 2016, <https://doi.org/10.1016/B978-0-08-100596-5.03396-5>.
- [104] K.D. Foster, J.M.V. Grigor, J.N. Cheong, M.J.Y. Yoo, J.E. Bronlund, M.P. Morgenstern, The role of oral processing in dynamic sensory perception, *J. Food Sci.* 76 (2) (2011) R49–R61, <https://doi.org/10.1111/J.1750-3841.2010.02029.X>.
- [105] D. Frank, G.T. Eyres, U. Piyasiri, M. Cochet-Broch, C.M. Delahunty, L. Lundin, I.M. Appelqvist, Effects of agar gel strength and fat on oral breakdown, volatile release, and sensory perception using in vivo and in vitro systems, *J. Agric. Food Chem.* 63 (41) (2015) 9093–9102, [https://doi.org/10.1021/ACS.JAFC.5B03441/ASSET/IMAGES/LARGE/JF-2015-034413\\_0004.JPEG](https://doi.org/10.1021/ACS.JAFC.5B03441/ASSET/IMAGES/LARGE/JF-2015-034413_0004.JPEG).
- [106] C. Frascolla, G. Lecuelle, P. Schlich, H. Cardot, Two sample tests for Semi-Markov processes with parametric sojourn time distributions: an application in sensory analysis, *Comput. Stat.* 37 (5) (2022) 2553–2580, <https://doi.org/10.1007/S00180-022-01210-X>.
- [107] S.C. Frost, J.W. Blackman, S.E. Ebeler, H. Heymann, Analysis of temporal dominance of sensation data using correspondence analysis on Merlot wine with differing maceration and cap management regimes, *Food Qual. Prefer.* 64 (2018) 245–252.
- [108] S.C. Frost, J.F. Harbertson, H. Heymann, A full factorial study on the effect of tannins, acidity, and ethanol on the temporal perception of taste and mouthfeel in red wine, *Food Qual. Prefer.* 62 (2017) 1–7, <https://doi.org/10.1016/J.FOODQUAL.2017.05.010>.
- [109] J.A. Fryer, T.S. Collins, E. Tomasino, Evaluation of different interstimulus rinse protocols on smoke attribute perception in wildfire-affected wines, *Molecules* 26 (18) (2021), <https://doi.org/10.3390/MOLECULES26185444>.
- [110] A.E. Furey, U. Hoeche, C. McLaughlin, F. Noci, Incorporation of roe, milt and liver from plaice (*Pleuronectes platessa*), herring (*Clupea harengus*) and cod (*Gadus morhua*) in newly developed seafood Pâtés: Sensory evaluation by teenage consumers in Ireland and their attitudes to seafood, *Int. J. Gastron. Food Sci.* 28 (2022), <https://doi.org/10.1016/J.IJGFS.2022.100524>.
- [111] M.V. Galmarini, R.J. Silva Paz, D. Enciso Choquehuanca, M.C. Zamora, B. Mesz, Impact of music on the dynamic perception of coffee and evoked emotions evaluated by temporal dominance of sensations (TDS) and emotions (TDE), *Food Res. Int.* 150 (2021), <https://doi.org/10.1016/J.FOODRES.2021.110795>.
- [112] Mara V. Galmarini, L. Dufau, A.L. Loiseau, M. Visalli, P. Schlich, Wine and cheese: two products or one association? a new method for assessing wine-cheese pairing, *Beverages* 4 (1) (2018), <https://doi.org/10.3390/BEVERAGES4010013>.
- [113] Mara V. Galmarini, A.L. Loiseau, D. Debreyer, M. Visalli, P. Schlich, Use of multi-intake temporal dominance of sensations (TDS) to evaluate the influence of wine on cheese perception, *J. Food Sci.* 82 (11) (2017) 2669–2678, <https://doi.org/10.1111/1750-3841.13932>.
- [114] Mara V. Galmarini, A.L. Loiseau, M. Visalli, P. Schlich, Use of multi-intake temporal dominance of sensations (TDS) to evaluate the influence of cheese on wine perception, *J. Food Sci.* 81 (10) (2016) S2566–S2577, <https://doi.org/10.1111/1750-3841.13500>.
- [115] M.V. Galmarini, R. Symoneaux, M. Visalli, M.C. Zamora, P. Schlich, Could Time-Intensity by a trained panel be replaced with a progressive profile done by consumers? A case on chewing gum, *Food Qual. Prefer.* 48 (2016).
- [116] M.V. Galmarini, M. Visalli, P. Schlich, Advances in representation and analysis of mono and multi-intake Temporal Dominance of Sensations data, *Food Qual. Prefer.* 56 (2017) 247–255, <https://doi.org/10.1016/j.foodqual.2016.01.011>.
- [117] J. Gao, J.J.X. Ong, J. Henry, W. Zhou, Physical breakdown of bread and its impact on texture perception: a dynamic perspective, *Food Qual. Prefer.* 60 (2017) 96–104, <https://doi.org/10.1016/J.FOODQUAL.2017.03.014>.
- [118] J. Gao, S.L. Tay, A.H.S. Koh, W. Zhou, Dough and bread making from high- and low-protein flours by vacuum mixing: Part 3. Oral processing of bread, *J. Cereal Sci.* 79 (2018) 408–417, <https://doi.org/10.1016/J.JCS.2017.12.002>.
- [119] K. Glanz, M. Basil, E. Maibach, J. Goldberg, D. Snyder, Why Americans eat what they do: taste, nutrition, cost, convenience, and weight control concerns as influences on food consumption, *J. Am. Diet. Assoc.* 98 (10) (1998) 1118–1126, [https://doi.org/10.1016/S0002-8223\(98\)00260-0](https://doi.org/10.1016/S0002-8223(98)00260-0).
- [120] C. Gonçalves, J. Rodrigues, H. Júnior, J. Carneiro, T. Freire, L. Freire, Sodium reduction in margarine using NaCl substitutes, *An. Acad. Bras. Cienc.* 89 (3) (2017) 2505–2513, <https://doi.org/10.1590/0001-3765201720150618>.
- [121] G.A.S. Gonçalves, N.S. Resende, C.S. Gonçalves, E.E.N. de Carvalho, J.V. de Resende, E.V.B.V. de Boas, How freezing methods affect the sensory profile of pasteurized and unpasteurized mangaba pulp, *Ciência Agrotecnol.* 44 (003020) (2020), e003020, <https://doi.org/10.1590/1413-7054202044003020>.
- [122] K. Gonzalez-Estano, D. Ciceri, F. Biasioli, M. Stieger, Differences in dynamic sensory perception between reformulated hazelnut chocolate spreads decrease when spreads are consumed with breads and wafers, *Food Qual. Prefer.* 98 (2022), <https://doi.org/10.1016/J.FOODQUAL.2022.104532>.
- [123] A. González-Mohino, S. Ventanas, M. Estévez, L.S. Olegario, Sensory characterization of iberian dry-cured loins by using check-all-that-apply (CATA) analysis and multiple-intake temporal dominance of sensations (TDS), *Foods* 10 (9) (2021), <https://doi.org/10.3390/FOODS10091983>.
- [124] J.L. Goza, G.R. Ziegler, J. Wee, J.E. Hayes, H. Hopfer, Salivary  $\alpha$ -amylase activity and flow rate explain differences in temporal flavor perception in a chewing gum matrix comprising starch-limonene inclusion complexes, *Food Res. Int.* 158 (2022), <https://doi.org/10.1016/J.FOODRES.2022.111573>.
- [125] M. Greis, R. Kukkonen, A.M. Lampi, L. Seppä, R. Partanen, M. Sandell, The impact of vanilla and lemon aromas on sensory perception in plant-based yogurts measured with static and dynamic methods, *Foods* 11 (14) (2022), <https://doi.org/10.3390/FOODS11142030>.
- [126] M. Greis, T. Sainio, K. Katina, A.J. Kinchla, A. Nolden, R. Partanen, L. Seppä, Dynamic texture perception in plant-based yogurt alternatives: identifying temporal drivers of liking by TDS, *Food Qual. Prefer.* 86 (2020), <https://doi.org/10.1016/J.FOODQUAL.2020.104019>.
- [127] W.S. Harwood, M.A. Drake, Application of temporal penalty analysis for the optimization of sugar reduction in protein beverages, *J. Sens. Stud.* 36 (3) (2021), <https://doi.org/10.1111/JOSS.12644>.
- [128] W.S. Harwood, M.N. Parker, M.A. Drake, Influence of ethanol concentration on sensory perception of rums using temporal check-all-that-apply, *J. Sens. Stud.* 35 (1) (2020), <https://doi.org/10.1111/JOSS.12546>.
- [129] D. Hawthornthwaite, Y. Ramjan, A. Rosenthal, Oral processing of low water content foods - a development to hutchings and lillford's breakdown path, *J. Texture Stud.* 46 (3) (2015) 212–218, <https://doi.org/10.1111/JTXX.12126>.
- [130] Y. He, S. Chen, K. Tang, M. Qian, X. Yu, Y. Xu, Sensory characterization of Baijiu pungency by combined time-intensity (TI) and temporal dominance of sensations (TDS), *Food Res. Int.* 147 (2021), <https://doi.org/10.1016/J.FOODRES.2021.110493>.



- [131] A.C. Hoek, D. Pearson, S.W. James, M.A. Lawrence, S. Friel, Healthy and environmentally sustainable food choices: consumer responses to point-of-purchase actions, *Food Qual. Prefer.* 58 (2017) 94–106, <https://doi.org/10.1016/J.FOODQUAL.2016.12.008>.
- [132] G. Hough, I. Wakeling, A. Mucci, E. Chambers IV, I.M. Gallardo, L.R. Alves, Number of consumers necessary for sensory acceptability tests, *Food Qual. Prefer.* 17 (6) (2006) 522–526, <https://doi.org/10.1016/J.FOODQUAL.2005.07.002>.
- [133] S.C. Hutchings, W. Cha, F.R. Dunshea, C. Sharma, D.D. Torrico, Understanding dominance: the effect of changing the definition of dominance when using TDS with consumers, *J. Sens. Stud.* 37 (4) (2022), e12750, <https://doi.org/10.1111/JOSS.12750>.
- [134] S.C. Hutchings, A. de Casanove, P. Schlich, D. O'Riordan, The effect of training on the temporal dominance of sensations method: a study with milk protein hydrolysates, *J. Sens. Stud.* 32 (6) (2017), e12303, <https://doi.org/10.1111/JOSS.12303>.
- [135] S.C. Hutchings, K.D. Foster, J.M.V. Grigor, J.E. Bronlund, M.P. Morgenstern, Temporal dominance of sensations: a comparison between younger and older subjects for the perception of food texture, *Food Qual. Prefer.* 31 (2014) 106–115.
- [136] S.C. Hutchings, K.D. Foster, D.I. Hedderley, M.P. Morgenstern, Differences between age groups in the use of the temporal dominance of sensations technique across a range of food textures, *J. Texture Stud.* 45 (3) (2014) 206–219, <https://doi.org/10.1111/JTXS.12066>.
- [137] S.C. Hutchings, K.M. Horner, V.A. Dible, J.M.V. Grigor, D. O'Riordan, Modification of aftertaste with a menthol mouthwash reduces food wanting, liking, and ad libitum intake of potato crisps, *Appetite* 108 (2017) 57–67, <https://doi.org/10.1016/J.APPET.2016.09.022>.
- [138] J. Ilic, I. Tomasevic, I. Djekic, Influence of boiling, steaming, and sous-vide on oral processing parameters of celeriac (*Apium graveolens* var. *rapaceum*), *Int. J. Gastronom. Food Sci.* 23 (2021), <https://doi.org/10.1016/J.IJGFS.2021.100308>.
- [139] J. Ilic, I. Tomasevic, I. Djekic, Influence of water-based and contact heating preparation methods on potato mechanical properties, mastication, and sensory perception, *Int. J. Gastronom. Food Sci.* 25 (2021), <https://doi.org/10.1016/J.IJGFS.2021.100401>.
- [140] J. Ilic, I. Tomasevic, I. Djekic, Purple eggplant and zucchini color, mechanical properties, mastication, and sensory perception influenced by boiling and grilling, *J. Texture Stud.* 53 (2) (2022) 174–184, <https://doi.org/10.1111/JTXS.12651>.
- [141] J. Ilic, I. Tomasevic, I. Djekic, Influence of boiling, grilling, and sous-vide on mastication, bolus formation, and dynamic sensory perception of wild boar ham, *Meat Sci.* 188 (2022), <https://doi.org/10.1016/J.MEATSCI.2022.108805>.
- [142] J. Ilic, I. Tomasevic, I. Djekic, Purple eggplant and zucchini color, mechanical properties, mastication, and sensory perception influenced by steaming and Sous-vide, *Int. J. Gastronom. Food Sci.* 28 (2022), 100549, <https://doi.org/10.1016/J.IJGFS.2022.100549>.
- [143] Y. Ishida, T. Shimizu, M. Yoshikawa, An analysis and comparison of keyword recommendation methods for scientific data, *Int. J. Digit. Libr.* 21 (3) (2020) 307–327, <https://doi.org/10.1007/S00799-020-00279-3/FIGURES/25>.
- [144] F.R. Jack, J.R. Piggott, A. Paterson, Analysis of textural changes in hard cheese during mastication by progressive profiling, *J. Food Sci.* 59 (3) (1994) 539–543.
- [145] S.R. Jaeger, F. Alcaire, D.C. Hunter, D. Jin, J.C. Castura, G. Ares, Number of terms to use in temporal check-all-that-apply studies (TCATA and TCATA Fading) for sensory product characterization by consumers, *Food Qual. Prefer.* 64 (2018) 154–159, <https://doi.org/10.1016/J.FOODQUAL.2017.09.013>.
- [146] S.R. Jaeger, M.K. Beresford, D.C. Hunter, F. Alcaire, J.C. Castura, G. Ares, Does a familiarization step influence results from a TCATA task? *Food Qual. Prefer.* 55 (2017) 91–97, <https://doi.org/10.1016/J.FOODQUAL.2016.09.001>.
- [147] G. Jager, P. Schlich, I. Tijssen, J. Yao, M. Visalli, C. de Graaf, M. Stieger, Temporal dominance of emotions: Measuring dynamics of food-related emotions during consumption, *Food Qual. Prefer.* 37 (2014).
- [148] R. Januszewska, E. Giret, F. Clement, I. Van Leuven, C. Goncalves, E. Vladislavleva, P. Pradal, R. Nàbo, A. Landuyt, G. D'Heer, S. Frommenwiler, H. Haefliger, Impact of vanilla origins on sensory characteristics of chocolate, *Food Res. Int.* 137 (2020), <https://doi.org/10.1016/J.FOODRES.2020.109313>.
- [149] M. Jeltrema, J. Beckley, J. Vahalik, J. Garza, Consumer textural food perception over time based on Mouth Behavior, *J. Texture Stud.* 51 (1) (2020) 185–194, <https://doi.org/10.1111/JTXS.12479>.
- [150] Johnson, S. L., Stone, W. J., Bunn, J. A., Lyons, T. S., & Navalta, J. W. (2020). New Author Guidelines in Statistical Reporting: Embracing an Era Beyond p < .05. *Int. J. Exercise Sci.*, 13(1), 1. /pmc/articles/PMC7523905/
- [151] S. Jourden, A. Saint-Eve, M. Panouillé, P. Lejeune, I. Déléris, I. Souchon, Respective impact of bread structure and oral processing on dynamic texture perceptions through statistical multiblock analysis, *Food Res. Int.* 87 (2016) 142–151, <https://doi.org/10.1016/J.FOODRES.2016.06.021>.
- [152] S. Jourden, A. Saint-Eve, B. Pollet, M. Panouillé, P. Lejeune, E. Guichard, I. Déléris, I. Souchon, Gaining deeper insight into aroma perception: an integrative study of the oral processing of breads with different structures, *Food Res. Int.* 92 (2017) 119–127, <https://doi.org/10.1016/J.FOODRES.2017.01.001>.
- [153] Solenne Jourden, M. Masson, A. Saint-Eve, M. Panouillé, D. Blumenthal, P. Lejeune, I. Déléris, I. Souchon, Effect of bread crumb and crust structure on the in vivo release of volatiles and the dynamics of aroma perception, *J. Agric. Food Chem.* 65 (16) (2017) 3330–3340, <https://doi.org/10.1021/ACS.JAFC.7B00287>.
- [154] J.Y. Junge, L.A. Mielby, Y. Zeng, Y.X. Sun, D.V. Byrne, J.C. Castura, U. Kidmose, Investigating the temporality of binary taste interactions in blends of sweeteners and citric acid in solution, *J. Sens. Stud.* 37 (6) (2022), <https://doi.org/10.1111/JOSS.12785>.
- [155] W. Kang, K.A. Bindon, X. Wang, R.A. Muhlack, P.A. Smith, J. Niimi, S.E.P. Bastian, Chemical and sensory impacts of Accentuated Cut Edges (ACE) grape must polyphenol extraction technique on shiraz wines, *Foods* 9 (8) (2020), <https://doi.org/10.3390/FOODS9081027>.
- [156] W. Kang, J. Niimi, R.A. Muhlack, P.A. Smith, S.E.P. Bastian, Dynamic characterization of wine astringency profiles using modified progressive profiling, *Food Res. Int.* 120 (2019) 244–254, <https://doi.org/10.1016/J.FOODRES.2019.02.041>.
- [157] K. Kantono, N. Hamid, D. Chadha, Q. Ma, I. Oey, M.M. Farouk, Pulsed electric field (Pef) processing of chilled and frozen-thawed lamb meat cuts: Relationships between sensory characteristics and chemical composition of meat, *Foods* 10 (5) (2021) 1148, <https://doi.org/10.3390/FOODS10051148/S1>.
- [158] K. Kantono, N. Hamid, I. Oey, S. Wang, Y. Xu, Q. Ma, F. Faridnia, M. Farouk, Physico-chemical and sensory properties of beef muscles after Pulsed Electric Field processing, *Food Res. Int.* 121 (2019) 1–11, <https://doi.org/10.1016/J.FOODRES.2019.03.020>.
- [159] K. Kantono, N. Hamid, D. Shepherd, Y.H.T. Lin, C. Brard, G. Grazioli, B. Thomas Carr, The effect of music on gelato perception in different eating contexts, *Food Res. Int.* 113 (2018) 43–56, <https://doi.org/10.1016/J.FOODRES.2018.06.030>.
- [160] K. Kantono, N. Hamid, D. Shepherd, Y.H.T. Lin, S. Skiredj, B.T. Carr, Emotional and electrophysiological measures correlate to flavour perception in the presence of music, *Physiol. Behav.* 199 (2019) 154–164, <https://doi.org/10.1016/J.PHYSBEH.2018.11.012>.
- [161] K. Kantono, N. Hamid, D. Shepherd, M.J.Y. Yoo, G. Grazioli, B.T. Carr, Listening to music can influence hedonic and sensory perceptions of gelati, *Appetite* 100 (2016) 244–255, <https://doi.org/10.1016/J.APPET.2016.02.143>.
- [162] H. Kawasaki, Y. Sekizaki, M. Hirota, Y. Sekine-Hayakawa, M. Nonaka, Analysis of binary taste-taste interactions of MSG, lactic acid, and NaCl by temporal dominance of sensations, *Food Qual. Prefer.* 52 (2016) 1–10, <https://doi.org/10.1016/J.FOODQUAL.2016.03.010>.
- [163] H. Kawasaki, W. Yoshimura, A. Wakita, C. Kasamatsu, Visualization of temporal differences between dominant perceptions in temporal dominance of sensations (TDS) and temporal check-all-that-apply (TCATA) perceptions using dominance-highlighted TCATA (dTCATA) curves, *Food Qual. Prefer.* 77 (2019) 166–171, <https://doi.org/10.1016/J.FOODQUAL.2019.05.009>.
- [164] H.M. Keefer, W.S. Harwood, J.C. Castura, M.A. Drake, Temporal ranking for characterization and improved discrimination of protein beverages, *J. Sens. Stud.* 37 (4) (2022), <https://doi.org/10.1111/JOSS.12751>.
- [165] H.R.M. Keefer, S. Nishku, P.D. Gerard, M.A. Drake, Role of sweeteners on temporality and bar hardening of protein bars, *J. Dairy Sci.* 103 (7) (2020) 6032–6053, <https://doi.org/10.3168/JDS.2019-17995>.
- [166] Heather R.M. Keefer, D. Rovai, M.A. Drake, A timely application—temporal methods, past, present, and future, *J. Food Sci.* 88 (S1) (2023) A21–A52, <https://doi.org/10.1111/1750-3841.16491>.
- [167] B. Kemp, S. Trussler, J. Willwerth, D. Inglis, Applying temporal check-all-that-apply (TCATA) to mouthfeel and texture properties of red wines, *J. Sens. Stud.* 34 (4) (2019), <https://doi.org/10.1111/JOSS.12503>.
- [168] S.E. Kemp, J. Hort, T. Hollowood, Time-dependent measures of perception in sensory evaluation, in: J. Hort, S.E. Kemp, T. Hollowood (Eds.), *Time-Dependent Measures of Perception in Sensory Evaluation*, John Wiley & Sons Ltd, 2017.
- [169] K. Khemacheevakul, J. Wolodko, H. Nguyen, W. Wismer, Temporal sensory perceptions of sugar-reduced 3D printed chocolates, *Foods* 10 (9) (2021), <https://doi.org/10.3390/FOODS10092082>.
- [170] M. Kiumarsi, D. Majchrzak, H. Jäger, J. Song, O. Lieleg, M. Shahbazi, Comparative study of instrumental properties and sensory profiling of low-calorie chocolate containing hydrophobically modified inulin. Part II: Proton mobility, topological, tribological and dynamic sensory properties, *Food Hydrocoll.* 110 (2021), <https://doi.org/10.1016/J.FOODHYD.2020.106144>.
- [171] A. Knaapila, Sensory and consumer research has a role in supporting sustainability of the food system, *Foods* 11 (13) (2022) 11, <https://doi.org/10.3390/FOODS11131958>.
- [172] R.I. Kobue-Lekalake, J.R.N. Taylor, H.L. de Kock, Application of the dual attribute time-intensity (DATI) sensory method to the temporal measurement of bitterness and astringency in sorghum, *Int. J. Food Sci. Technol.* 47 (3) (2012) 459–466, <https://doi.org/10.1111/J.1365-2621.2011.02862.X>.
- [173] C. Kuesten, J. Bi, Temporal drivers of liking based on functional data analysis and non-additive models for multi-attribute time-intensity data of fruit chews, *Foods* 7 (6) (2018), <https://doi.org/10.3390/FOODS7060084>.
- [174] C. Kuesten, J. Bi, Y. Feng, Exploring taffy product consumption experiences using a multi-attribute time-intensity (MATI) method, *Food Qual. Prefer.* 30 (2) (2013) 260–273, <https://doi.org/10.1016/J.FOODQUAL.2013.06.007>.
- [175] S. Kurata, R. Kuroda, F. Komaki, Statistical modeling for temporal dominance of sensations data incorporating individual characteristics of panelists: an application to data of milk chocolate, *J. Food Sci. Technol.* 59 (6) (2022) 2420–2428, <https://doi.org/10.1007/S13197-021-05260-9>.
- [176] D. Labbe, P. Schlich, N. Pineau, F. Gilbert, N. Martin, Temporal dominance of sensations and sensory profiling: a comparative study, *Food Qual. Prefer.* 20 (3) (2009) 216–221, <https://doi.org/10.1016/J.FOODQUAL.2008.10.001>.
- [177] L. Laguna, P. Varela, A. Salvador, S. Fiszman, A new sensory tool to analyse the oral trajectory of biscuits with different fat and fibre contents, *Food Res. Int.* 51 (2) (2013) 544–553, <https://doi.org/10.1016/J.FOODRES.2013.01.003>.
- [178] J. Lahne, Sensory science, the food industry, and the objectification of taste. <http://Journals.Openedition.Org/Aof>, 10, 2016, <https://doi.org/10.4000/AOF.7956>.
- [179] J. Lahne, Standard sensations: the production of objective experience from industrial technique, *Senses Soc.* 13 (1) (2018) 6–18, <https://doi.org/10.1080/17458927.2017.1420842>.
- [180] K. Laleg, C. Barron, S. Cordelle, P. Schlich, S. Walrand, V. Micard, How the structure, nutritional and sensory attributes of pasta made from legume flour is affected by the proportion of legume protein, *LWT* 79 (2017) 471–478, <https://doi.org/10.1016/J.LWT.2017.01.069>.

- [181] H.T. Lawless, H. Heymann, *Sensory Evaluation of Food*, (2nd Ed.). Springer, New York, 2010, <https://doi.org/10.1007/978-1-4419-6488-5>.
- [182] B. Le Calvé, C. Saint-Léger, N. Gaudreau, I. Cayeux, Capturing key sensory moments during biscuit consumption: using TDS to evaluate several concurrent sensory modalities, *J. Sens. Stud.* 34 (6) (2019), <https://doi.org/10.1111/JOSS.12529>.
- [183] F.M. Le Révérend, C. Hidrio, A. Fernandes, V. Aubry, Comparison between temporal dominance of sensations and time intensity results, *Food Qual. Prefer.* 19 (2) (2008) 174–178, <https://doi.org/10.1016/J.FOODQUAL.2007.06.012>.
- [184] G. Lecuelle, M. Visalli, H. Cardot, P. Schlich, Modeling temporal dominance of sensations with semi-Markov chains, *Food Qual. Prefer.* 67 (2018).
- [185] W.E.I. Lee, M. Pangborn, Time-intensity: the temporal aspects of sensory perception, *Food Technol.* 40 (1986) 78–82.
- [186] F. Lenfant, C. Loret, N. Pineau, C. Hartmann, N. Martin, Perception of oral food breakdown. The concept of sensory trajectory, *Appetite* 52 (3) (2009) 659–667.
- [187] M. Lepage, T. Neville, A. Rytz, P. Schlich, N. Martin, N. Pineau, Panel performance for temporal dominance of sensations, *Food Qual. Prefer.* 38 (2014) 24–29.
- [188] H. Lesme, P. Courcoux, C. Alleaume, M.H. Famelart, S. Bouhallab, C. Prost, C. Rannou, Contribution of temporal dominance of sensations performed by modality (M-TDS) to the sensory perception of texture and flavor in semi-solid products: a case study on fat-free strawberry yogurts, *Food Qual. Prefer.* 80 (2020), <https://doi.org/10.1016/J.FOODQUAL.2019.103789>.
- [189] S. Lester, K. Hurst, L. Cornacchia, M. Kleijn, C. Ayed, V. Dinu, M.A. Taylor, I. Fisk, The relation between stimulated salivary flow and the temporal consumption experience of a liquid oral nutritional supplement, *Appetite* 166 (2021), <https://doi.org/10.1016/J.APPET.2021.105325>.
- [190] L. Liang, W. Duan, J. Zhang, Y. Huang, Y. Zhang, B. Sun, Characterization and molecular docking study of taste peptides from chicken soup by sensory analysis combined with nano-LC-Q-TOF-MS/MS, *Food Chem.* 383 (2022), <https://doi.org/10.1016/J.FOODCHEM.2022.132455>.
- [191] Y.H.T. Lin, N. Hamid, D. Shepherd, K. Kantono, C. Spence, Environmental sounds influence the multisensory perception of chocolate gelati, *Foods* 8 (4) (2019), <https://doi.org/10.3390/FOODS8040124>.
- [192] Y.H.T. Lin, N. Hamid, D. Shepherd, K. Kantono, C. Spence, Musical and non-musical sounds influence the flavour perception of chocolate ice cream and emotional responses, *Foods* 11 (12) (2022), <https://doi.org/10.3390/FOODS11121784>.
- [193] Y.H.T. Lin, N. Hamid, D. Shepherd, K. Kantono, C. Spence, Sound pleasantness influences the perception of both emotional and non-emotional foods, *Food Res. Int.* 162 (2022), <https://doi.org/10.1016/J.FOODRES.2022.111909>.
- [194] S.L. Liu, Y.M. Jaw, L.F. Wang, G.C.C. Chuang, Z.Y. Zhuang, Y.S. Chen, B.K. Liou, Evaluation of sensory quality for taiwanese specialty teas with cold infusion using cata and temporal cata by taiwanese consumers, *Foods* 10 (10) (2021), <https://doi.org/10.3390/FOODS10102344>.
- [195] L. Lorido, M. Estévez, S. Ventanas, Fast and dynamic descriptive techniques (Flash Profile, Time-intensity and Temporal Dominance of Sensations) for sensory characterization of dry-cured loins, *Meat Sci.* 145 (2018) 154–162, <https://doi.org/10.1016/J.MEATSCI.2018.06.028>.
- [196] Laura Lorido, J. Hort, M. Estévez, S. Ventanas, Reporting the sensory properties of dry-cured ham using a new language: time intensity (TI) and temporal dominance of sensations (TDS), *Meat Sci.* 121 (2016) 166–174, <https://doi.org/10.1016/J.MEATSCI.2016.06.009>.
- [197] Laura Lorido, E. Pizarro, M. Estévez, S. Ventanas, Emotional responses to the consumption of dry-cured hams by Spanish consumers: a temporal approach, *Meat Sci.* 149 (2019) 126–133, <https://doi.org/10.1016/J.MEATSCI.2018.11.015>.
- [198] G. Lytra, S. Tempere, S. Marchand, G. De Revel, J.C. Barbe, How do esters and dimethyl sulphide concentrations affect fruity aroma perception of red wine? Demonstration by dynamic sensory profile evaluation, *Food Chem.* 194 (2016) 196–200, <https://doi.org/10.1016/J.FOODCHEM.2015.07.143>.
- [199] J. Lyu, J. Fu, S. Chen, Y. Xu, Y. Nie, K. Tang, Impact of tannins on intraoral aroma release and retronasal perception, including detection thresholds and temporal perception by taste, in model wines, *Food Chem.* 375 (2022), <https://doi.org/10.1016/J.FOODCHEM.2021.131890>.
- [200] Q. Ma, N. Hamid, I. Oey, Kantono., K., Faridina, F., Yoo, M., & Farouk, M., Effect of chilled and freezing pre-treatments prior to pulsed electric field processing on volatile profile and sensory attributes of cooked lamb meats, *Innov. Food Sci. Emerg. Technol.* 37 (2016) 359–374, <https://doi.org/10.1016/J.IFSET.2016.04.009>.
- [201] J.C. Machado, Z.E. Martins, I.M.P.L.V.O. Ferreira, Dynamic sensory analysis by Temporal Dominance of Sensations paired with dynamic liking and wanting methodologies to understand the consumers' preference between two beer styles enriched with elderberries, *LWT* 173 (2023), <https://doi.org/10.1016/J.LWT.2022.114266>.
- [202] Magalhães da Veiga, I. Moreira, L. de Figueiredo Vilela, M.G. da Cruz Pedrosa Miguel, C. Santos, N. Lima, R. Freitas Schwan, Impact of a microbial cocktail used as a starter culture on cocoa fermentation and chocolate flavor, *Molecules* (Basel, Switzerland) 22 (5) (2017), <https://doi.org/10.3390/MOLECULES22050766>.
- [203] B. Mahieu, M. Visalli, A. Thomas, P. Schlich, Using Free-Comment with consumers to obtain temporal sensory descriptions of products, *Food Qual. Prefer.* 86 (2020), 104008, <https://doi.org/10.1016/J.FOODQUAL.2020.104008>.
- [204] J. Makame, T. Cronje, N.M. Emmambux, H. De Kock, Dynamic oral texture properties of selected indigenous complementary porridges used in African communities, *Foods* 8 (6) (2019), <https://doi.org/10.3390/FOODS8060221>.
- [205] N. Mammasse, P. Schlich, Adequate number of consumers in a liking test. Insights from resampling in seven studies, *Food Qual. Prefer.* 31 (1) (2014) 124–128, <https://doi.org/10.1016/J.FOODQUAL.2012.01.009>.
- [206] J. Marcano, P. Varela, L.M. Cunha, S. Fiszman, Relating dynamic perception of reformulated cheese pies to consumers' expectations of satiating ability, *Food Res. Int.* 78 (2015) 369–377, <https://doi.org/10.1016/J.FOODRES.2015.09.005>.
- [207] N. Martínez-García, E.J. de Ramírez-Rivera, L.G. Ramón-Canul, R. Servín-Juárez, M. López-Espíndola, J.A. Herrera-Corredor, Sweetener solutions as binding agents for amaranth bars: evolution of temporal dominance of sensory attributes, *Int. J. Food Sci. Technol.* 55 (6) (2020) 2570–2579, <https://doi.org/10.1111/IJFS.14510>.
- [208] S.J. Martínez, N.N. Batista, C.L. Ramos, D.R. Dias, R.F. Schwan, Brazilian cocoa hybrid-mix fermentation: Impact of microbial dominance as well as chemical and sensorial properties, *J. Food Sci.* 86 (6) (2021) 2604–2614, <https://doi.org/10.1111/1750-3841.15758>.
- [209] P.M.M. Martins, N.N. Batista, M.G.C.P. da Miguel, J.B.P. Simão, J.R. Soares, R.F. Schwan, Coffee growing altitude influences the microbiota, chemical compounds and the quality of fermented coffees, *Food Res. Int.* 129 (2020), <https://doi.org/10.1016/J.FOODRES.2019.108872>.
- [210] E.J. Mayhew, S.J. Schmidt, P. Schlich, S.Y. Lee, Temporal texture profile and identification of glass transition temperature as an instrumental predictor of stickiness in a caramel system, *J. Food Sci.* 82 (9) (2017) 2167–2176, <https://doi.org/10.1111/1750-3841.13822>.
- [211] E.J. Mayhew, S.J. Schmidt, P. Schlich, S.Y. Lee, Correlation of consumer perception of stickiness and contributing texture attributes to trained panelist temporal evaluations in a caramel system, *Food Qual. Prefer.* 65 (2018) 72–80, <https://doi.org/10.1016/J.FOODQUAL.2017.11.009>.
- [212] H.R. McCain-Keefer, S. Meals, M.A. Drake, The sensory properties and consumer acceptance of cold brew coffee, *J. Sens. Stud.* 35 (6) (2020), <https://doi.org/10.1111/JOSS.12604>.
- [213] K.M. McMahon, C. Culver, J.C. Castura, C.F. Ross, Perception of carbonation in sparkling wines using descriptive analysis (DA) and temporal check-all-that-apply (TCAT A), *Food Qual. Prefer.* 59 (2017) 14–26, <https://doi.org/10.1016/J.FOODQUAL.2017.01.017>.
- [214] M. Medel-Marabolí, J.L. Romero, E. Obrequé-Slier, A. Contreras, A. Peña-Neira, Effect of the commercial tannin on the sensorial temporality of astringency, *Food Res. Int.* 102 (2017) 341–347, <https://doi.org/10.1016/J.FOODRES.2017.09.099>.
- [215] Marcela Medel-Marabolí, R. López-Solís, D. Valenzuela-Prieto, S. Vargas-Silva, E. Obrequé-Slier, Limited relationship between temporality of sensory perception and phenolic composition of red wines, *LWT* 142 (2021), <https://doi.org/10.1016/J.LWT.2021.111028>.
- [216] C. Medoro, M. Cianciabella, F. Camilli, M. Magli, E. Gatti, S. Predieri, C. Medoro, M. Cianciabella, F. Camilli, M. Magli, E. Gatti, S. Predieri, Sensory Profile of Italian craft beers, beer taster expert versus sensory methods: a comparative study, *Food Nutr. Sci.* 7 (6) (2016) 454–465, <https://doi.org/10.4236/FNS.2016.76047>.
- [217] S. Meillon, C. Urbano, P. Schlich, Contribution of the Temporal Dominance of Sensations (TDS) method to the sensory description of subtle differences in partially dealcoholized red wines, *Food Qual. Prefer.* 20 (7) (2009) 490–499, <https://doi.org/10.1016/J.FOODQUAL.2009.04.006>.
- [218] S. Meillon, D. Viala, M. Medel, C. Urbano, G. Guillot, P. Schlich, Impact of partial alcohol reduction in Syrah wine on perceived complexity and temporality of sensations and link with preference, *Food Qual. Prefer.* 21 (7) (2010) 732–740, <https://doi.org/10.1016/J.FOODQUAL.2010.06.005>.
- [219] B.S. Menegali, M.M. Selani, E. Saldaña, I. Patinho, J.P. Diniz, P.S. Melo, N.J. de Pimentel Filho, C.J. Contreras-Castillo, Pink pepper extract as a natural antioxidant in chicken burger: Effects on oxidative stability and dynamic sensory profile using Temporal Dominance of Sensations, *LWT* 121 (2020), <https://doi.org/10.1016/J.LWT.2019.108986>.
- [220] A.G.T. Menezes, N.N. Batista, C.L. Ramos, A.R. de Andrade e Silva, P. Efraim, A.C.M. Pinheiro, R.F. Schwan, Investigation of chocolate produced from four different Brazilian varieties of cocoa (Theobroma cacao L.) inoculated with *Saccharomyces cerevisiae*, *Food Res. Int.* 81 (2016) 83–90, <https://doi.org/10.1016/J.FOODRES.2015.12.036>.
- [221] M.E.C. Menis-Henrique, N.S. Janzantti, I. Andriot, E. Sémon, O. Berdeaux, P. Schlich, A.C. Conti-Silva, Cheese-flavored expanded snacks with low lipid content: oil effects on the in vitro release of butyric acid and on the duration of the dominant sensations of the products, *LWT* 105 (2019) 30–36, <https://doi.org/10.1016/J.LWT.2019.01.052>.
- [222] J. Mesurolle, A. Saint-Eve, I. Délaris, I. Souchon, Impact of fruit piece structure in yogurts on the dynamics of aroma release and sensory perception, *Molecules* 18 (5) (2013) 6035–6056, <https://doi.org/10.3390/molecules18056035>.
- [223] L. Methven, K. Rahelu, N. Economou, L. Kinneavy, L. Ladbrooke-Davis, O.B. Kennedy, D.S. Mottram, M.A. Gosney, The effect of consumption volume on profile and liking of oral nutritional supplements of varied sweetness: sequential profiling and boredom tests, *Food Qual. Prefer.* 21 (8) (2010) 948–955, <https://doi.org/10.1016/J.FOODQUAL.2010.04.009>.
- [224] M. Meyners, J. Castura, The analysis of temporal check-all-that-apply (TCATA) data, *Food Qual. Prefer.* 67 (2018) 67–76, <https://doi.org/10.1016/J.FOODQUAL.2017.02.003>.
- [225] Michael Meyners, Panel and panelist agreement for product comparisons in studies of Temporal Dominance of Sensations, *Food Qual. Prefer.* 22 (4) (2011) 365–370, <https://doi.org/10.1016/J.FOODQUAL.2011.01.006>.
- [226] Michael Meyners, Temporal liking and CATA analysis of TDS data on flavored fresh cheese, *Food Qual. Prefer.* 47 (2016) 101–108, <https://doi.org/10.1016/J.FOODQUAL.2015.02.005>.
- [227] Michael Meyners, Temporal methods: Are we comparing apples and oranges? *Food Qual. Prefer.* 79 (2020), <https://doi.org/10.1016/j.foodqual.2018.11.022>.
- [228] Michael Meyners, J.C. Castura, The analysis of temporal check-all-that-apply (TCATA) data, *Food Qual. Prefer.* 67 (2018) 67–76, <https://doi.org/10.1016/J.FOODQUAL.2017.02.003>.
- [229] Michael Meyners, J.C. Castura, Did assessors select attributes by chance alone in your TDS study, and how relevant is it to know? *Food Res. Int.* 119 (2019) 571–583, <https://doi.org/10.1016/j.foodres.2018.10.035>.

- [230] Michael Meyners, N. Pineau, Statistical inference for temporal dominance of sensations data using randomization tests, *Food Qual. Prefer.* 21 (7) (2010) 805–814, <https://doi.org/10.1016/J.FOODQUAL.2010.04.004>.
- [231] M.G.C.P. da Miguel, L.V.C. de Reis, P. Efraim, C. Santos, N. Lima, R.F. Schwan, Cocoa fermentation: microbial identification by MALDI-TOF MS, and sensory evaluation of produced chocolate, *LWT* 77 (2017) 362–369, <https://doi.org/10.1016/J.LWT.2016.11.076>.
- [232] B. Missbach, D. Majchrzak, R. Sulzner, B. Wansink, M. Reichel, J. Koenig, Exploring the flavor life cycle of beers with varying alcohol content, *Food Sci. Nutri.* 5 (4) (2017) 889–895, <https://doi.org/10.1002/FSN3.472>.
- [233] J. Mitchell, J.C. Castura, M. Thibodeau, G. Pickering, Application of TCATA to examine variation in beer perception due to thermal taste status, *Food Qual. Prefer.* 73 (2019) 135–142, <https://doi.org/10.1016/J.FOODQUAL.2018.11.016>.
- [234] E.C. Morais, A.C.M. Pinheiro, C.A. Nunes, H.M.A. Bolini, Multiple time-intensity analysis and temporal dominance of sensations of chocolate dairy dessert using prebiotic and different high-intensity sweeteners, *J. Sens. Stud.* 29 (5) (2014) 339–350, <https://doi.org/10.1111/JOSS.12115>.
- [235] P. Morell, C. Ramírez-López, J.F. Vélez-Ruiz, S. Fiszman, Relating HPMC concentration to elicited expected satiation in milk-based desserts, *Food Hydrocoll.* 45 (2015) 158–167, <https://doi.org/10.1016/J.FOODHYD.2014.11.011>.
- [236] H.R. Moskowitz, Validity and Reliability in Sensory Science, Viewpoints and Controversies in Sensory Science and Consumer Product Testing 97–101 (2008), <https://doi.org/10.1002/9780470385128.CH5>.
- [237] R. Moss, S. Barker, M.B. McSweeney, The use of temporal check-all-that-apply and category scaling by experienced panellists to evaluate sweet and dry ciders, *Beverages* 7 (2) (2021), <https://doi.org/10.3390/BEVERAGES7020024>.
- [238] A. Nair, Publication bias - importance of studies with negative results! *Indian J. Anaesth.* 63 (6) (2019) 505, <https://doi.org/10.4103/IJA.IJA.142.19>.
- [239] L.Á. do Nascimento, B.P. Avila, R. Colussi, M.C. Elias, Effect of abiotic stress on bioactive compound production in germinated brown rice, *Cereal Chem.* 97 (4) (2020) 868–876, <https://doi.org/10.1002/CCHCE.10310>.
- [240] M. Ng, J.B. Lawlor, S. Chandra, C. Chaya, L. Hewson, J. Hort, Using quantitative descriptive analysis and temporal dominance of sensations analysis as complementary methods for profiling commercial blackcurrant squashes, *Food Qual. Prefer.* 25 (2) (2012) 121–134, <https://doi.org/10.1016/J.FOODQUAL.2012.02.004>.
- [241] H. Nguyen, W.V. Wismer, Temporal sensory profiles of regular and sodium-reduced foods elicited by Temporal Dominance of Sensations (TDS) and Temporal Check-All-That-Apply (TCATA), *Foods* 11 (3) (2022), <https://doi.org/10.3390/FOODS11030457>.
- [242] Q.C. Nguyen, T. Næs, P. Varela, When the choice of the temporal method does make a difference: TCATA, TDS and TDS by modality for characterizing semi-solid foods, *Food Qual. Prefer.* 66 (2018) 95–106.
- [243] Q.C. Nguyen, M.B. Wahlgren, V.L. Almlí, P. Varela, Understanding the role of dynamic texture perception in consumers' expectations of satiety and satiation. A case study on barley bread, *Food Qual. Prefer.* 62 (2017) 218–226, <https://doi.org/10.1016/J.FOODQUAL.2017.06.006>.
- [244] D.W. Ningtayas, B. Bhandari, N. Bansal, S. Prakash, Sequential aspects of cream cheese texture perception using temporal dominance of sensations (TDS) tool and its relation with flow and lubrication behaviour, *Food Res. Int.* 120 (2019) 586–594, <https://doi.org/10.1016/J.FOODRES.2018.11.009>.
- [245] F. Nogueira Soares Souza, S. Rocha Vieira, M. Leopoldina Lamounier Campidelli, R. Abadia Reis Rocha, L. Milani Avelar Rodrigues, P. Henrique Santos, J. de Deus Souza Carneiro, I. Maria de Carvalho Tavares, C. Patrícia de Oliveira, Impact of using cocoa bean shell powder as a substitute for wheat flour on some of chocolate cake properties, *Food Chem.* 381 (2022), <https://doi.org/10.1016/J.FOODCHEM.2022.132215>.
- [246] T. Nygren, A.N. Nilsen, Å. Öström, Dynamic changes of taste experiences in wine and cheese combinations, *J. Wine Res.* 28 (2) (2017) 105–122, <https://doi.org/10.1080/09571264.2017.1284655>.
- [247] L.M. Oberrauter, R. Januszewska, P. Schlich, D. Majchrzak, Sensory evaluation of dark origin and non-origin chocolates applying Temporal Dominance of Sensations (TDS), *Food Res. Int.* 111 (2018) 39–49, <https://doi.org/10.1016/J.FOODRES.2018.05.007>.
- [248] T. Okada, S. Okamoto, Y. Yamada, Affective dynamics: causality modeling of temporally evolving perceptual and affective responses, *IEEE Trans. Affect. Comput.* 13 (2) (2022) 628–639, <https://doi.org/10.1109/TAFFC.2019.2942931>.
- [249] S. Okamoto, Bootstrap resampling of temporal dominance of sensations curves to compute uncertainties, *Foods* 10 (10) (2021) 2472, <https://doi.org/10.3390/FOODS10102472>.
- [250] S. Okamoto, Y. Ehara, T. Okada, Y. Yamada, Affective dynamics: principal motion analysis of temporal dominance of sensations and emotions data, *IEEE Trans. Affect. Comput.* 13 (2) (2022) 871–880, <https://doi.org/10.1109/TAFFC.2020.2971700>.
- [251] J.B. Olatujoye, L. Methven, P. Jauregi, Effect of  $\beta$ -lactoglobulin on perception of astringency in red wine as measured by sequential profiling, *LWT* 130 (2020), <https://doi.org/10.1016/J.LWT.2020.109611>.
- [252] L.S. Olegario, A. González-Mohino, M. Estévez, M.S. Madruga, S. Ventanas, Impact of 'free-from' and 'healthy choice' labeled versions of chocolate and coffee on temporal profile (multiple-intake TDS) and liking, *Food Res. Int.* 137 (2020), <https://doi.org/10.1016/J.FOODRES.2020.109342>.
- [253] A.A.A. Oliveira, A.C. Andrade, S.C. Bastos, J.P.F. Condino, A. Curzi Júnior, A.C.M. Pinheiro, Use of strawberry and vanilla natural flavors for sugar reduction: a dynamic sensory study with yogurt, *Food Res. Int.* 139 (2021), <https://doi.org/10.1016/J.FOODRES.2020.109972>.
- [254] D. Oliveira, L. Antúnez, A. Giménez, J.C. Castura, R. Deliza, G. Ares, Sugar reduction in probiotic chocolate-flavored milk: impact on dynamic sensory profile and liking, *Food Res. Int.* 75 (2015) 148–156, <https://doi.org/10.1016/J.FOODRES.2015.05.050>.
- [255] M. Oliveira Mendes, M. Ferreira de Moraes, J. Ferreira Rodrigues, A2A2 milk: Brazilian consumers' opinions and effect on sensory characteristics of Petit Suisse and Minas cheeses, *LWT* 108 (2019) 207–213, <https://doi.org/10.1016/J.LWT.2019.03.064>.
- [256] P. Oliver, S. Cicerale, E. Pang, R. Keast, A comparison of Temporal Dominance of Sensation (TDS) and Quantitative Descriptive Analysis (QDA™) to identify flavors in strawberries, *J. Food Sci.* 83 (4) (2018) 1094–1102, <https://doi.org/10.1111/1750-3841.14096>.
- [257] M.H.S. Pacheco, E.A. Esmerino, C.S.C. Capobianco, A.G. Cruz, L.S. Leddomado, T.C. Pimentel, I.M. Benevides Filho, M.Q. de Freitas, Bottled mineral water: classic and temporal descriptive sensory analysis associated with liking, *Br. Food J.* 120 (7) (2018) 1547–1560, <https://doi.org/10.1108/BJFJ-11-2017-0655>.
- [258] C.S. de Paglarini, V.A.S. Vidal, M. dos Santos, L.O. Coimbra, E.A. Esmerino, A.G. Cruz, M.A.R. Pollonio, Using dynamic sensory techniques to determine drivers of liking in sodium and fat-reduced Bologna sausage containing functional emulsion gels, *Food Res. Int.* 132 (2020), <https://doi.org/10.1016/J.FOODRES.2020.109066>.
- [259] J. Palczak, D. Blumenthal, J. Delarue, From consumption behaviour to sensory measurement: Sensory characterization of the perceived flavour complexity of a chocolate dessert experience, *Food Qual. Prefer.* 78 (2019), 103734, <https://doi.org/10.1016/J.FOODQUAL.2019.103734>.
- [260] J. Palczak, D. Blumenthal, J. Delarue, Influence of sensory complexity on preferences for novel gourmet dairy desserts. Does Berlyne's theory apply to desserts? *Food Qual. Prefer.* 84 (2020), <https://doi.org/10.1016/J.FOODQUAL.2020.103957>.
- [261] M. Panouillé, A. Saint-Eve, I. Délérís, F. Le Bleis, I. Souchon, Oral processing and bolus properties drive the dynamics of salty and texture perceptions of bread, *Food Res. Int.* 62 (2014) 238–246, <https://doi.org/10.1016/J.FOODRES.2014.02.031>.
- [262] A.C. Panzarini, M.E.C. Menis-Henrique, A.C. Conti-Silva, Effect of salt and monosodium glutamate on the sensory characteristics of low-sodium cheese-flavored corn grits expanded snacks, *J. Food Process. Preserv.* 44 (12) (2020), <https://doi.org/10.1111/JFPP.14936>.
- [263] M.N. Parker, K. Lopetcharat, M.A. Drake, Consumer acceptance of natural sweeteners in protein beverages, *J. Dairy Sci.* 101 (10) (2018) 8875–8889, <https://doi.org/10.3168/JDS.2018-14707>.
- [264] N.M. Patterson, Y. Zhong, B.J. James, N. Gant, M.J. Hautus, Effect of basic structural variation, aimed at increasing perceivable textures in model foods, on the perception of textural complexity, *Food Qual. Prefer.* 91 (2021), <https://doi.org/10.1016/J.FOODQUAL.2021.104196>.
- [265] M.T. Paulsen, T. Næs, Ø. Ueland, E.O. Rukke, M. Hersleth, Preference mapping of salmon-sauce combinations: the influence of temporal properties, *Food Qual. Prefer.* 27 (2) (2013) 120–127, <https://doi.org/10.1016/J.FOODQUAL.2012.09.010>.
- [266] M.T. Paulsen, A. Nys, R. Kvarberg, M. Hersleth, Effects of NaCl substitution on the sensory properties of sausages: temporal aspects, *Meat Sci.* 98 (2) (2014) 164–170, <https://doi.org/10.1016/J.MEATSCI.2014.05.020>.
- [267] L.I. Paz, R. Januszewska, J.J. Schouteten, J. Van Impe, Challenges of pairing chocolates and nuts: perceptions, interactions and dynamics of contrasting chocolates with nuts, *Food Res. Int.* 148 (2021), <https://doi.org/10.1016/J.FOODRES.2021.110620>.
- [268] S. Pecore, C. Rathjen-Nowak, T. Tamminen, Temporal Order of Sensations. *9th Pangborn Symposium*, 2011.
- [269] M. Pedrotti, A. Spaccasassi, F. Biasioli, V. Fogliano, Ethnicity, gender and physiological parameters: their effect on in vivo flavour release and perception during chewing gum consumption, *Food Res. Int.* 116 (2019) 57–70, <https://doi.org/10.1016/J.FOODRES.2018.12.019>.
- [270] C. Peltier, M. Visalli, H. Labouré, C. Héland, I. Andriot, S. Cordelle, J.L. Le Quééré, P. Schlich, Automatic pretreatment and multiblock analysis of flavor release and sensory temporal data simultaneously collected in vivo, *J. Chemom.* (2022), <https://doi.org/10.1002/CEM.3450>.
- [271] C.T.M. Pereira, D.M. Pereira, H.M.A. Bolini, Dynamic sensory profile of mango skyr yoghurt added of prebiotic and natural sweeteners: multiple time-intensity analysis and temporal dominance of sensations, *Int. J. Food Sci. Technol.* 56 (8) (2021) 4159–4169, <https://doi.org/10.1111/IJFS.15045>.
- [272] T.S. Pereira, N.N. Batista, L.P. Santos Pimenta, S.J. Martinez, L.S. Ribeiro, J.A. Oliveira Naves, R.F. Schwan, Self-induced anaerobiosis coffee fermentation: Impact on microbial communities, chemical composition and sensory quality of coffee, *Food Microbiol.* 103 (2022), <https://doi.org/10.1016/J.FM.2021.103962>.
- [273] M.A. Peyron, I. Gierczynski, C. Hartmann, C. Loret, D. Dardevet, N. Martin, A. Woda, Role of physical bolus properties as sensory inputs in the trigger of swallowing, *PLoS One* 6 (6) (2011), <https://doi.org/10.1371/JOURNAL.PONE.0021167>.
- [274] L. Pierguidi, S. Spinelli, E. Monteone, C. Dinnella, The combined use of temporal dominance of sensations (TDS) and discrete time-intensity (DTI) to describe the dynamic sensory profile of alcoholic cocktails, *Food Qual. Prefer.* 93 (2021), <https://doi.org/10.1016/J.FOODQUAL.2021.104281>.
- [275] N. Pineau, S. Cordelle, P. Schlich, Temporal Dominance of Sensations: A new technique to record several sensory attributes simultaneously over time. *5th Pangborn Symposium*, 2003.
- [276] N. Pineau, P. Schlich, S. Cordelle, C. Mathonnière, S. Issanchou, A. Imbert, M. Rogeaux, P. Etiévant, E. Köster, Temporal Dominance of Sensations: construction of the TDS curves and comparison with time-intensity, *Food Qual. Prefer.* 20 (6) (2009) 450–455.
- [277] Nicolas Pineau, A.G. de Bouillé, M. Lepage, F. Lenfant, P. Schlich, N. Martin, A. Rytz, Temporal Dominance of Sensations: What is a good attribute list? *Food Qual. Prefer.* 26 (2) (2012) 159–165.
- [278] P. Pinto da Rosa, B. Pio Ávila, I. Damé Veber Angelo, R. Garavaglia Chesini, T. Albandes Fernandes, J. da Silva Camacho, M. Bugoni, V.F.B. Roll, M.A. Gularte, Impact of different chicken meat production systems on consumers' purchase perception, *Br. Poult. Sci.* 62 (3) (2021) 387–395, <https://doi.org/10.1080/00071668.2020.1857335>.

- [279] B. Pio Ávila, L.O. Cardozo, G.D. Alves, A.M. Pereira, M.A. Gularte, R.P. de Oliveira, Targeted chemical and sensory profiling to guide consumption of blood orange, *J. Culinary Sci. Technol.* 20 (4) (2022) 350–365, <https://doi.org/10.1080/15428052.2020.1843581>.
- [280] E. Pionnier, S. Nicklaus, C. Chabanet, L. Mioche, A.J. Taylor, J.L. Le Quéré, C. Salles, Flavor perception of a model cheese: Relationships with oral and physico-chemical parameters, *Food Qual. Prefer.* 15 (7–8 SPEC.ISS) (2004) 843–852, <https://doi.org/10.1016/J.FOODQUAL.2004.04.011>.
- [281] E. Pittari, P. Piombino, I. Andriot, V. Cheyrier, S. Cordelle, G. Feron, K. Gourrat, J.L. Le Quéré, E. Meudec, L. Moio, F. Neiers, P. Schlich, F. Canon, Effects of oenological tannins on aroma release and perception of oxidized and non-oxidized red wine: a dynamic real-time in-vivo study coupling sensory evaluation and analytical chemistry, *Food Chem.* 372 (2022), <https://doi.org/10.1016/J.FOODCHEM.2021.131229>.
- [282] C.S. da Portela, I.F. de Almeida, T.A.D. dos Reis, B.R.B. Hickmann, M.T. de Benassi, Effects of brewing conditions and coffee species on the physicochemical characteristics, preference and dynamics of sensory attributes perception in cold brews, *Food Res. Int.* 151 (2022), <https://doi.org/10.1016/J.FOODRES.2021.110860>.
- [283] A.R. Poveromo, H. Hopfer, Temporal check-all-that-apply (TCATA) reveals matrix interaction effects on flavor perception in a model wine matrix, *Foods* 8 (12) (2019), <https://doi.org/10.3390/FOODS8120641>.
- [284] D. Pu, W. Duan, Y. Huang, L. Zhang, Y. Zhang, B. Sun, F. Ren, H. Zhang, Y. Tang, Characterization of the dynamic texture perception and the impact factors on the bolus texture changes during oral processing, *Food Chem.* 339 (2021), <https://doi.org/10.1016/J.FOODCHEM.2020.128078>.
- [285] D. Pu, Y. Shan, K. Qiao, L. Zhang, B. Sun, Y. Zhang, Development of an effective protocol for evaluating the saltiness intensity enhancement of umami compounds, *J. Agric. Food Chem.* (2022), <https://doi.org/10.1021/ACS.JAF.C.2C06293>.
- [286] D. Pu, H. Zhang, Y. Zhang, B. Sun, F. Ren, H. Chen, J. He, Characterization of the aroma release and perception of white bread during oral processing by gas chromatography-ion mobility spectrometry and temporal dominance of sensations analysis, *Food Res. Int.* 123 (2019) 612–622, <https://doi.org/10.1016/J.FOODRES.2019.05.016>.
- [287] D. Pu, Y. Zhang, B. Sun, F. Ren, H. Zhang, H. Chen, Y. Tang, Characterization of the key taste compounds during bread oral processing by instrumental analysis and dynamic sensory evaluation, *LWT* 138 (2021), <https://doi.org/10.1016/J.LWT.2020.110641>.
- [288] P. Puerta, R. Garzón, C.M. Rosell, S. Fiszman, L. Laguna, A. Tárrega, Modifying gluten-free bread's structure using different baking conditions: Impact on oral processing and texture perception, *LWT* 140 (2021), 110718, <https://doi.org/10.1016/J.LWT.2020.110718>.
- [289] P. Puerta, L. Laguna, B. Villegas, A. Rizo, S. Fiszman, A. Tarrega, Oral processing and dynamics of texture perception in commercial gluten-free breads, *Food Res. Int.* 134 (2020), <https://doi.org/10.1016/J.FOODRES.2020.109233>.
- [290] A. Purkayastha, E. Palmaro, H.J. Falk-Krzesinski, J. Baas, Comparison of two article-level, field-independent citation metrics: Field-Weighted Citation Impact (FWCI) and Relative Citation Ratio (RCR), *J. Inform.* 13 (2) (2019) 635–642, <https://doi.org/10.1016/J.JOI.2019.03.012>.
- [291] E.J. de Ramírez-Rivera, I.M. Rodríguez-Buenfil, M. Pérez-Robles, J.E. Oney-Montalvo, W. Prinyawiwatkul, A. Cabal-Prieto, M.O. Ramírez-Sucre, J.A. Herrera-Corredor, Development and validation of a methodology for the sensorimetric characterisation of high-pungency peppers: a case study of habanero pepper (*Capsicum chinense* Jacq.), *Int. J. Food Sci. Technol.* 56 (2) (2021) 573–586, <https://doi.org/10.1111/IJFS.14735>.
- [292] J.M. Ramos-Díaz, Å. Rinnan, K. Jouppila, Application of NIR imaging to the study of expanded snacks containing amaranth, quinoa and kañiwa, *LWT* 102 (2019) 8–14, <https://doi.org/10.1016/J.LWT.2018.12.029>.
- [293] S.U. Ramos-Gabriel, J.A. Herrera-Corredor, J.G. Gamboa-Alvarado, E.J. de Ramírez-Rivera, Impact of fermented whey addition on resulting sensory characteristics and consumer preference of ripened cheeses, *Emirates J. Food Agric.* 31 (6) (2019) 449–458, <https://doi.org/10.9755/EJFA.2019.V31.16.1959>.
- [294] I. Ramsey, V. Dinu, R. Linforth, G.E. Yakubov, S.E. Harding, Q. Yang, R. Ford, I. Fisk, Understanding the lost functionality of ethanol in non-alcoholic beer using sensory evaluation, aroma release and molecular hydrodynamics, *Sci. Rep.* 10 (1) (2020), <https://doi.org/10.1038/S41598-020-77697-5>.
- [295] I. Ramsey, C. Ross, R. Ford, I. Fisk, Q. Yang, J. Gomez-Lopez, J. Hort, Using a combined temporal approach to evaluate the influence of ethanol concentration on liking and sensory attributes of lager beer, *Food Qual. Prefer.* 68 (2018) 292–303, <https://doi.org/10.1016/J.FOODQUAL.2018.03.019>.
- [296] P. Rébenaque, A. Rawlyer, M.O. Boldi, P. Deneulin, Comparison between sensory and nephelometric evaluations of tannin fractions obtained by ultrafiltration of red wines, *Chemosens. Percept.* 8 (1) (2015) 33–43, <https://doi.org/10.1007/S12078-015-9175-X>.
- [297] M.M. Reyes, J.C. Castura, J.E. Hayes, Characterizing dynamic sensory properties of nutritive and nonnutritive sweeteners with temporal check-all-that-apply, *J. Sens. Stud.* 32 (3) (2017), <https://doi.org/10.1111/JOSS.12270>.
- [298] L.S. Ribeiro, S.R. Evangelista, M.G. da Cruz Pedrozo Miguel, J. van Mullem, C.F. Silva, R.F. Schwan, Microbiological and chemical-sensory characteristics of three coffee varieties processed by wet fermentation, *Ann. Microbiol.* 68 (10) (2018) 705–716, <https://doi.org/10.1007/S13213-018-1377-4>.
- [299] L.S. Ribeiro, D.E. Ribeiro, S.R. Evangelista, M.G.C.P. da Miguel, A.C.M. Pinheiro, F.M. Borém, R.F. Schwan, Controlled fermentation of semi-dry coffee (*Coffea arabica*) using starter cultures: a sensory perspective, *LWT Food Sci. Technol.* 82 (2017) 32–38, <https://doi.org/10.1016/J.LWT.2017.04.008>.
- [300] M.N. Ribeiro, D.M. Rodrigues, R.A.R. Rocha, L.R. Silveira, J.P.F. Condino, A.C. Júnior, V.R. de Souza, C.A. Nunes, A.C.M. Pinheiro, Optimising a stevia mix by mixture design and napping: a case study with high protein plain yoghurt, *Int. Dairy J.* 110 (2020), <https://doi.org/10.1016/J.IDAIRYJ.2020.104802>.
- [301] J.D. Rios-Mera, E. Saldaña, M.L.M. Cruzado-Bravo, M.M. Martins, I. Patinho, M.M. Selani, D. Valentin, C.J. Contreras-Castillo, Impact of the content and size of NaCl on dynamic sensory profile and instrumental texture of beef burgers, *Meat Sci.* 161 (2020), <https://doi.org/10.1016/J.MEATSCI.2019.107992>.
- [302] A. Rizo, I. Jimenez-Pérez, A. Camacho-García, S. Fiszman, P. Pérez-Soriano, A. Tarrega, Impact of texture TDS and flavour TDS tasks and of chocolate-chip biscuit characteristics on oral processing features, *Food Qual. Prefer.* 76 (2019) 109–117, <https://doi.org/10.1016/J.FOODQUAL.2019.04.005>.
- [303] A. Rizo, E. Peña, A.D. Alarcon-Rojo, S. Fiszman, A. Tarrega, Relating texture perception of cooked ham to the bolus evolution in the mouth, *Food Res. Int.* 118 (2019) 4–12, <https://doi.org/10.1016/J.FOODRES.2018.02.073>.
- [304] A. Rizo, K. Vidák, S. Fiszman, A. Tarrega, Influence of fading duration on TCATA evaluation, *Food Qual. Prefer.* 79 (2020), <https://doi.org/10.1016/J.FOODQUAL.2018.12.004>.
- [305] R.A.R. Rocha, M.N. Ribeiro, G.A. Silva, L.C.R. Rocha, A.C.M. Pinheiro, C.A. Nunes, J.D.S. de Carneiro, Temporal profile of flavor enhancers MAG, MSG, GMP, and IMP, and their ability to enhance salty taste, in different reductions of sodium chloride, *J. Food Sci.* 85 (5) (2020) 1565–1575, <https://doi.org/10.1111/1750-3841.15121>.
- [306] D.M. Rodrigues, V.R. de Souza, J.F. Mendes, C.A. Nunes, A.C.M. Pinheiro, Microparticulated salts mix: An alternative to reducing sodium in shoestring potatoes, *LWT* 69 (2016) 390–399, <https://doi.org/10.1016/J.LWT.2016.01.056>.
- [307] D.M. Rodrigues, B.V.E. Veríssimo, A.C.M. Pinheiro, V.R. de Souza, Drivers of liking by TDS and acceptance of orange juice subject to different preservation processes, *J. Food Process. Preserv.* 42 (6) (2018), <https://doi.org/10.1111/JFPP.13639>.
- [308] J.F. Rodrigues, C.S. Gonçalves, R.C. Pereira, J.D.S. Carneiro, A.C.M. Pinheiro, Utilization of temporal dominance of sensations and time intensity methodology for development of low-sodium Mozzarella cheese using a mixture of salts, *J. Dairy Sci.* 97 (8) (2014) 4733–4744, <https://doi.org/10.3168/JDS.2014-7913>.
- [309] Jéssica F. Rodrigues, G. Junqueira, C.S. Gonçalves, J.D.S. Carneiro, A.C.M. Pinheiro, C.A. Nunes, Elaboration of garlic and salt spice with reduced sodium intake, *An. Acad. Bras. Cienc.* 86 (4) (2014) 2065–2075, <https://doi.org/10.1590/0001-3765201420130464>.
- [310] Jéssica Ferreira Rodrigues, R.S. da Andrade, S.C. Bastos, S.B. Coelho, A.C.M. Pinheiro, Miracle fruit: an alternative sugar substitute in sour beverages, *Appetite* 107 (2016) 645–653, <https://doi.org/10.1016/J.APPET.2016.09.014>.
- [311] Jéssica Ferreira Rodrigues, R.S. da Andrade, V.R. de Souza, L.R. de Abreu, A.F. de Barcelos, A.G. da Cruz, E.A. Esmerino, A.C.M. Pinheiro, Drivers of linking of Prato cheeses: an evaluation using the check all that apply (CATA) and temporal dominance of sensations (TDS) tools, *Food Sci. Technol. Int.* 28 (5) (2022) 379–387, <https://doi.org/10.1177/10820132211018037>.
- [312] Jéssica Ferreira Rodrigues, J.P.F. Condino, A.C.M. Pinheiro, C.A. Nunes, Temporal dominance of sensations of chocolate bars with different cocoa contents: Multivariate approaches to assess TDS profiles, *Food Qual. Prefer.* 47 (2016) 91–96, <https://doi.org/10.1016/J.FOODQUAL.2015.06.020>.
- [313] Jéssica Ferreira Rodrigues, V.R. de Souza, R.R. Lima, J.D.S. de Carneiro, C.A. Nunes, A.C.M. Pinheiro, Temporal dominance of sensations (TDS) panel behavior: a preliminary study with chocolate, *Food Qual. Prefer.* 54 (2016) 51–57.
- [314] Jéssica Ferreira Rodrigues, L.M.B. Resende, L.F.O. de da Silva, M.P. Pedrosa, A.C.M. Pinheiro, C.A. Nunes, Quality of olive oils from southeastern Brazil, *Bragantia* 78 (4) (2019) 479–489, <https://doi.org/10.1590/1678-4499.20180294>.
- [315] Jéssica Ferreira Rodrigues, V.R. de Souza, R.R. Lima, A.G. da Cruz, A.C.M. Pinheiro, Tds of cheese: implications of analyzing texture and taste simultaneously, *Food Res. Int.* 106 (2018) 1–10, <https://doi.org/10.1016/J.FOODRES.2017.12.048>.
- [316] E. Rogério Tavares Filho, E. Almeida Esmerino, V. de Almeida Santos-Junior, A. Cazzelato Lins da Silva, H. Maria André Bolini, Dynamic aspects of salt reduction in tomato sauce by use of flavor enhancers and a bitter blocker, *Food Sci. Technol. Int.* 26 (6) (2020) 549–559, <https://doi.org/10.1177/1082013220913361>.
- [317] A.J. Rosenthal, C. Share, Temporal Dominance of Sensations of peanuts and peanut products in relation to Hutchings and Lillford's "breakdown path", *Food Qual. Prefer.* 32 (PC) (2014) 311–316, <https://doi.org/10.1016/J.FOODQUAL.2013.09.004>.
- [318] P.T. Ross, N.L. Bibler Zaidi, Limited by our limitations, *Perspect. Med. Educ.* 8 (4) (2019) 261, <https://doi.org/10.1007/S40037-019-00530-X>.
- [319] A. Saint-Eve, I. Délérís, M. Panouillé, F. Dakowski, S. Cordelle, P. Schlich, I. Souchon, How texture influences aroma and taste perception over time in candies, *Chemosens. Percept.* 4 (1–2) (2011) 32–41, <https://doi.org/10.1007/S12078-011-9086-4>.
- [320] A. Saint-Eve, M. Panouillé, C. Capitaine, I. Délérís, I. Souchon, Dynamic aspects of texture perception during cheese consumption and relationship with bolus properties, *Food Hydrocoll.* 46 (2015) 144–152, <https://doi.org/10.1016/J.FOODHYD.2014.12.015>.
- [321] A. Saita, K. Yamamoto, A. Raevskiy, R. Takei, H. Washio, S. Shioiri, N. Sakai, Crispness, the key for the palatability of "kakimoto": A sensory study with onomatopoeic words, *Foods* 10 (8) (2021), <https://doi.org/10.3390/FOODS10081724>.
- [322] E. Saldaña, M.M. Martins, B.S. Menegali, M.M. Selani, C.J. Contreras-Castillo, Effect of smoking and fat content on the dynamic perception of bacon by Brazilian consumers, *Scientia Agropecuaria* 10 (2) (2019) 169–173, <https://doi.org/10.17268/SCI.AGROPECU.2019.02.01>.
- [323] E. Saldaña, I. Soletti, M.M. Martins, B.S. Menegali, T.C. Merlo, M.M. Selani, A.C.B. Teixeira, F.G. da Silva, C.J. Contreras-Castillo, Understanding consumers' dynamic sensory perception for bacon smoked with different Brazilian woods, *Meat Sci.* 154 (2019) 46–53, <https://doi.org/10.1016/J.MEATSCI.2019.04.006>.
- [324] M. Santagiuliana, L. Broers, I.S. Marigómez, M. Stieger, B. Piqueras-Fiszman, E. Scholten, Strategies to compensate for undesired gritty sensations in foods, *Food Qual. Prefer.* 81 (2020), <https://doi.org/10.1016/J.FOODQUAL.2019.103842>.

- [325] G.A. Santos Gonçalves, N.S. Resende, C.S. Gonçalves, E.M. de Alcântara, E.E. Nunes Carvalho, J.V. de Resende, M.Á. Cirillo, de Barros Vilas Boas, E. V., Temporal dominance of sensations for characterization of strawberry pulp subjected to pasteurization and different freezing methods, *LWT* 77 (2017) 413–421, <https://doi.org/10.1016/J.LWT.2016.11.077>.
- [326] K. Sato, H. Kinugasa, Influence of Japanese green tea on the Koku attributes of bonito stock: Proposed basic rules of pairing Japanese green tea with Washoku, *J. Sens. Stud.* 34 (6) (2019), <https://doi.org/10.1111/JOSS.12539>.
- [327] P. Schlich, Temporal Dominance of Sensations (TDS): a new deal for temporal sensory analysis, *Curr. Opin. Food Sci.* 15 (2017) 38–42.
- [328] M.R. Schumaker, C. Diako, J.C. Castura, C.G. Edwards, C.F. Ross, Influence of wine composition on consumer perception and acceptance of Brettanomyces metabolites using temporal check-all-that-apply methodology, *Food Res. Int.* 116 (2019) 963–972, <https://doi.org/10.1016/J.FOODRES.2018.09.034>.
- [329] P. Sethupathy, S.R. Priyadarshini, J.A. Moses, C. Anandharamakrishnan, Matrix-dependent oral processing, oro-sensory perception, and glycemic index of chocolate bars, *J. Food Process. Preserv.* 45 (12) (2021), <https://doi.org/10.1111/JFPP.16067>.
- [330] M. Shahbazi, H. Jäger, J. Chen, R. Ettelaie, Construction of 3D printed reduced-fat meat analogue by emulsion gels. Part II: Printing performance, thermal, tribological, and dynamic sensory characterization of printed objects, *Food Hydrocoll.* 121 (2021), <https://doi.org/10.1016/J.FOODHYD.2021.107054>.
- [331] M. Shahbazi, H. Jäger, R. Ettelaie, Application of Pickering emulsions in 3D printing of personalized nutrition. Part II: Functional properties of reduced-fat 3D printed cheese analogues, *Colloids Surf. A Physicochem. Eng. Asp.* 624 (2021), <https://doi.org/10.1016/J.COLSURFA.2021.126760>.
- [332] M. Shahbazi, H. Jäger, R. Ettelaie, A promising therapeutic soy-based pickering emulsion gel stabilized by a multifunctional microcrystalline cellulose: application in 3D food printing, *J. Agric. Food Chem.* 70 (7) (2022) 2374–2388, <https://doi.org/10.1021/ACS.JAFAC.1C05644>.
- [333] S. Shanthamma, S. Priyanka, S. Priyanga, J.A. Moses, C. Anandharamakrishnan, Production of low glycemic index chocolates with natural sugar substitutes, *J. Culin. Sci. Technol.* (2021), <https://doi.org/10.1080/15428052.2021.1978364>.
- [334] M. Sharma, L. Duizer, Characterizing the dynamic textural properties of hydrocolloids in pureed foods - a comparison between TDS and TCATA, *Foods* 8 (6) (2019), <https://doi.org/10.3390/FOODS8060184>.
- [335] N. Shimaoka, S. Okamoto, Y. Akiyama, Y. Yamada, Linking temporal dominance of sensations for primary-sensory and multi-sensory attributes using canonical correlation analysis, *Foods* 11 (6) (2022) 781, <https://doi.org/10.3390/FOODS11060781>.
- [336] Ana P. Silva, H.P. Voss, H. van Zyl, T. Hogg, C. de Graaf, M. Pintado, G. Jager, Temporal dominance of sensations, emotions, and temporal liking measured in a bar for two similar wines using a multi-sip approach, *J. Sens. Stud.* 33 (5) (2018), <https://doi.org/10.1111/JOSS.12459>.
- [337] Ana Patricia Silva, H.P. Voss, H. van Zyl, T. Hogg, C. de Graaf, M. Pintado, G. Jager, Effect of adding hop aroma in beer analysed by temporal dominance of sensations and emotions coupled with temporal liking, *Food Qual. Prefer.* 75 (2019) 54–63, <https://doi.org/10.1016/J.FOODQUAL.2019.02.001>.
- [338] H.L.A. Silva, C.F. Balthazar, R. Silva, A.H. Vieira, R.G.B. Costa, E.A. Esmerino, M.Q. Freitas, A.G. Cruz, Sodium reduction and flavor enhancer addition in probiotic prato cheese: Contributions of quantitative descriptive analysis and temporal dominance of sensations for sensory profiling, *J. Dairy Sci.* 101 (10) (2018) 8837–8846, <https://doi.org/10.3168/JDS.2018-14819>.
- [339] R. Silva, R.S. Rocha, J.T. Guimarães, C.F. Balthazar, Hugo Scudino, G.L.P.A. Ramos, T.C. Pimentel, M.C. Silva, F.P. Silva Henrique, M.C.K.H. Duarte, M.Q. Freitas, A.G. Cruz, E.A. Esmerino, Dulce de leite submitted to ohmic heating treatment: Consumer sensory profile using preferred attribute elicitation (PAE) and temporal check-all-that-apply (TCATA), *Food Res. Int.* 134 (2020), <https://doi.org/10.1016/J.FOODRES.2020.109217>.
- [340] S.C.C. Simioni, D.M. Tovar, J.F. Rodrigues, V.R. de Souza, C.A. Nunes, V. Vietoris, A.C.M. Pinheiro, Temporal dominance of sensations and preferences of Brazilians and Slovians: a cross-cultural study of cachaças stored with woods from the Amazon rainforest, *J. Sci. Food Agric.* 98 (11) (2018) 4058–4064, <https://doi.org/10.1002/JSFA.8922>.
- [341] S. Simunovic, V. Đorđević, B. Lakićević, I. Djekic, J.M. Lorenzo, F.J. Barba, I. Tomasevic, Digital evaluation of nitrite-reduced “kulen” fermented sausage quality, *J. Food Qual.* 2022 (2022), <https://doi.org/10.1155/2022/2480746>.
- [342] A. Sizo, A. Lino, L.P. Reis, Á. Rocha, An overview of assessing the quality of peer review reports of scientific articles, *Int. J. Inf. Manag.* 46 (2019) 286–293, <https://doi.org/10.1016/J.IJINFORMGT.2018.07.002>.
- [343] L.B. Sjöström, The descriptive analysis of flavor, *Food Acceptance Testing Methodology*, 1954.
- [344] M. Sokolowsky, U. Fischer, Evaluation of bitterness in white wine applying descriptive analysis, time-intensity analysis, and temporal dominance of sensations analysis, *Anal. Chim. Acta* 732 (2012) 46–52, <https://doi.org/10.1016/J.ACA.2011.12.024>.
- [345] M. Sokolowsky, A. Rosenberger, U. Fischer, Sensory impact of skin contact on white wines characterized by descriptive analysis, time-intensity analysis and temporal dominance of sensations analysis, *Food Qual. Prefer.* 39 (2013) 285–297, <https://doi.org/10.1016/J.FOODQUAL.2014.07.002>.
- [346] J.C. Solomando, T. Antequera, S. Ventanas, T. Perez-Palacios, Sensory profile and consumer perception of meat products enriched with EPA and DHA using fish oil microcapsules, *Int. J. Food Sci. Technol.* 56 (6) (2021) 2926–2937, <https://doi.org/10.1111/IJFS.14932>.
- [347] R. Sousa Lima, A. Cazelatto de Medeiros, H.M. André Bolini, Does the indoor thermal environment influence the dominant sensation in a functional beverage attribute? *J. Food Sci.* 85 (10) (2020) 3536–3542, <https://doi.org/10.1111/1750-3841.15427>.
- [348] L. Souza Olegario, A. González-Mohino, M. Estévez, M.S. Madruga, S. Ventanas, Impact of absence of lactose on the dynamic sensory profile of yogurt: a multiple-intake TDS approach, *LWT* 162 (2022), <https://doi.org/10.1016/J.LWT.2022.113430>.
- [349] F. Sparvoli, S. Giofré, E. Cominelli, E. Avite, G. Giuberti, D. Luongo, E. Gatti, M. Cianciabella, G.M. Daniele, M. Rossi, S. Predieri, Sensory characteristics and nutritional quality of food products made with a biofortified and lectin free common bean (*Phaseolus vulgaris* L.) flour, *Nutrients* 13 (12) (2021) 4517, <https://doi.org/10.3390/NU13124517>.
- [350] T. Stolle, F. Grondinger, A. Dunkel, C. Meng, G. Médard, B. Kuster, T. Hofmann, Salivary proteome patterns affecting human salt taste sensitivity, *J. Agric. Food Chem.* 65 (42) (2017) 9275–9286, <https://doi.org/10.1021/ACS.JAFAC.7B03862>.
- [351] H. Stone, R.N. Bleibaum, H.A. Thomas, Sensory evaluation practices, *Sensory Evaluation Practices*, (4th Ed.) Elsevier Inc., 2012, <https://doi.org/10.1016/C2009-0-63404-8>.
- [352] V.W.K. Tan, M.S.M. Wee, O. Tomic, C.G. Forde, Temporal sweetness and side tastes profiles of 16 sweeteners using temporal check-all-that-apply (TCATA), *Food Res. Int.* 121 (2019) 39–47, <https://doi.org/10.1016/J.FOODRES.2019.03.019>.
- [353] H. Tanaya, Y. Nagai, Investigating the relationship between geometric features of voids and textures in aerated foods, *J. Adv. Mech. Design Syst. Manuf.* 16 (6) (2022), <https://doi.org/10.1299/JAMDSM.2022JAMDSM0062>.
- [354] C.S. Tang, V.W.K. Tan, P.S. Teo, C.G. Forde, Savoury and kokumi enhancement increases perceived calories and expectations of fullness in eucaloric beef broths, *Food Qual. Prefer.* 83 (2020), <https://doi.org/10.1016/J.FOODQUAL.2020.103897>.
- [355] J. Tang, D.S. Larsen, L. Ferguson, B.J. James, Textural complexity model foods assessed with instrumental and sensory measurements, *J. Texture Stud.* 48 (1) (2017) 9–22, <https://doi.org/10.1111/JTXS.12188>.
- [356] E. Teillet, P. Schlich, C. Urbano, S. Cordelle, E. Guichard, Sensory methodologies and the taste of water, *Food Qual. Prefer.* 21 (8) (2010) 967–976, <https://doi.org/10.1016/J.FOODQUAL.2010.04.012>.
- [357] A. Thomas, M. Chambault, L. Dreyfuss, C.C. Gilbert, A. Hegyi, S. Henneberg, A. Knippertz, E. Kostyra, S. Kremer, A.P. Silva, P. Schlich, Measuring temporal liking simultaneously to Temporal Dominance of Sensations in several intakes. An application to Gouda cheeses in 6 European countries, *Food Res. Int.* 99 (2017) 426–434, <https://doi.org/10.1016/J.FOODRES.2017.05.035>.
- [358] A. Thomas, A.J. van der Stelt, J. Prokop, J.B. Lawlor, P. Schlich, Alternating temporal dominance of sensations and liking scales during the intake of a full portion of an oral nutritional supplement, *Food Qual. Prefer.* 53 (2016) 159–167, <https://doi.org/10.1016/J.FOODQUAL.2016.06.008>.
- [359] A. Thomas, A.J. van der Stelt, P. Schlich, J. Ben Lawlor, Temporal drivers of liking for oral nutritional supplements for older adults throughout the day with monitoring of hunger and thirst status, *Food Qual. Prefer.* 70 (2018) 40–48, <https://doi.org/10.1016/J.FOODQUAL.2017.05.001>.
- [360] Arnaud Thomas, M. Visalli, S. Cordelle, P. Schlich, Temporal drivers of liking, *Food Qual. Prefer.* 40 (2015) 365–375.
- [361] D. Thomas, I. Hodges, Designing and Managing Your Research Project: Core Skills for Social and Health Research. Designing and Managing Your Research Project: Core Skills for Social and Health Research, 2010, <https://doi.org/10.4135/9781446289044>.
- [362] K. Toko, Visualization of changes in taste of food during chewing process, *Sensors Mater.* 34 (10) (2022) 3739–3750, <https://doi.org/10.18494/SAM4012>.
- [363] B. Tomadoni, S. Fiszman, M.R. Moreira, A. Tarrega, The role of the dynamic sensory perception in the reformulation of shakes: use of TDS for studying the effect of milk, fiber, and flavor addition, *J. Food Sci.* 83 (1) (2018) 198–204, <https://doi.org/10.1111/1750-3841.14008>.
- [364] D.D. Torrico, Novel techniques to measure the sensory, emotional, and physiological responses of consumers toward foods, *Foods* 10 (11) (2021) 2620, <https://doi.org/10.3390/FOODS10112620>.
- [365] A.C. Tricco, E. Lillie, W. Zarin, K.K. O'Brien, H. Colquhoun, D. Levac, D. Moher, M.D.J. Peters, T. Horsley, L. Weeks, S. Hempel, E.A. Akl, C. Chang, J. McGowan, L. Stewart, L. Hartling, A. Aldcroft, M.G. Wilson, C. Garrity, S.E. Straus, PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation, *Ann. Intern. Med.* 169 (7) (2018) 467–473, <https://doi.org/10.7326/M18-0850>.
- [366] R. van Bommel, M. Stieger, N. Boelee, P. Schlich, G. Jager, From first to last bite: temporal dynamics of sensory and hedonic perceptions using a multiple-intake approach, *Food Qual. Prefer.* 78 (2019), <https://doi.org/10.1016/J.FOODQUAL.2019.103748>.
- [367] R. van Bommel, M. Stieger, P. Schlich, G. Jager, Dutch consumers do not hesitate: Capturing implicit 'no dominance durations using Hold-down Temporal Dominance methodologies for Sensations (TDS) and Emotions (TDE)', *Food Qual. Prefer.* 71 (2019) 332–342.
- [368] A. van Eck, V. Fogliano, V. Galindo-Cuspinera, E. Scholten, M. Stieger, Adding condiments to foods: How does static and dynamic sensory perception change when bread and carrots are consumed with mayonnaise? *Food Qual. Prefer.* 73 (2019) 154–170, <https://doi.org/10.1016/J.FOODQUAL.2018.11.013>.
- [369] A. van Eck, N. Hardeman, N. Karatza, V. Fogliano, E. Scholten, M. Stieger, Oral processing behavior and dynamic sensory perception of composite foods: toppings assist saliva in bolus formation, *Food Qual. Prefer.* 71 (2019) 497–509, <https://doi.org/10.1016/J.FOODQUAL.2018.05.009>.
- [370] A. Vandeputte, J. Romans, F. Lenfant, N. Pineau, Innovative methods to assess the evolution of the sensory characteristics during the tasting of a full product portion (several bites). *9th Pangborn Symposium*, 2011.
- [371] P. Varela, L. Antúnez, M. Carlehög, F. Alcaire, J.C. Castura, I. Berget, A. Giménez, T. Næs, G. Ares, What is dominance? An exploration of the concept in TDS tests with trained assessors and consumers, *Food Qual. Prefer.* 64 (2018) 72–81.
- [372] P. Varela, A.C. Mosca, Q.C. Nguyen, J.A. McEwan, I. Berget, Individual differences underlying food intake and liking in semisolid foods, *Food Qual. Prefer.* 87 (2021), <https://doi.org/10.1016/J.FOODQUAL.2020.104023>.

- [373] P. Varela, A. Pintor, S. Fiszman, How hydrocolloids affect the temporal oral perception of ice cream, *Food Hydrocoll.* 36 (2014) 220–228, <https://doi.org/10.1016/J.FOODHYD.2013.10.005>.
- [374] G. Vazallo-Valleumbroco, M. Medel-Marabolí, Á. Peña-Neira, R. López-Solís, E. Obreque-Slier, Commercial enological tannins: Characterization and their relative impact on the phenolic and sensory composition of Carménère wine during bottle aging, *LWT* 83 (2017) 172–183, <https://doi.org/10.1016/J.LWT.2017.05.022>.
- [375] L. Vázquez-Araújo, D. Parker, E. Woods, Comparison of temporal-sensory methods for beer flavor evaluation, *J. Sens. Stud.* 28 (5) (2013) 387–395, <https://doi.org/10.1111/JOSS.12064>.
- [376] A.L. Velázquez, L. Vidal, P. Varela, G. Ares, Cross-modal interactions as a strategy for sugar reduction in products targeted at children: case study with vanilla milk desserts, *Food Res. Int.* 130 (2020), <https://doi.org/10.1016/J.FOODRES.2019.108920>.
- [377] A.L. Velázquez, L. Vidal, P. Varela, G. Ares, Can children use temporal sensory methods to describe visual and food stimuli? *Food Qual. Prefer.* 86 (2020), 104002, <https://doi.org/10.1016/J.FOODQUAL.2020.104002>.
- [378] L. Vidal, L. Antúnez, G. Ares, F. Cuffia, P.Y. Lee, M. Le Blond, S.R. Jaeger, Sensory product characterisations based on check-all-that-apply questions: further insights on how the static (CATA) and dynamic (TCATA) approaches perform, *Food Res. Int.* 125 (2019), 108510, <https://doi.org/10.1016/J.FOODRES.2019.108510>.
- [379] L. Vidal, L. Antúnez, A. Giménez, K. Medina, E. Boido, G. Ares, Dynamic characterization of red wine astringency: case study with Uruguayan Tannat wines, *Food Res. Int.* 82 (2016) 128–135, <https://doi.org/10.1016/J.FOODRES.2016.02.002>.
- [380] L. Vidal, J.C. Castura, B. Coste, A. Picallo, S.R. Jaeger, G. Ares, Analysis of TCATA Fading data: imputation of gaps in temporal profiles, *Food Qual. Prefer.* 59 (2017) 114–122, <https://doi.org/10.1016/J.FOODQUAL.2017.02.008>.
- [381] V. Vitoris, P. Zajác, J. Čapla, A. Mendelová, K. Krížanová, L. Benešová, Comparison of coffee species by sensory panel and electronic nose, *J. Microbiol. Biotechnol. Food Sci.* 5 (3) (2015) 234–237, <https://doi.org/10.15414/JMBFS.2015.16.5.3.234-237>.
- [382] W.C. Vimercati, C.S. da Araújo, L.L. Macedo, H.C. Fonseca, J.S. Guimarães, L.R. de Abreu, S.M. Pinto, Physicochemical, rheological, microbiological and sensory properties of newly developed coffee flavored kefir, *LWT* 123 (2020), <https://doi.org/10.1016/J.LWT.2020.109069>.
- [383] M. Visalli, C. Lange, L. Mallet, S. Cordelle, P. Schlich, Should I use touchscreen tablets rather than computers and mice in TDS trials? *Food Qual. Prefer.* 52 (2016) 11–16, <https://doi.org/10.1016/j.foodqual.2016.03.007>.
- [384] M. Visalli, B. Mahieu, A. Thomas, P. Schlich, Concurrent vs. retrospective temporal data collection: attack-evolution-finish as a simplification of Temporal Dominance of Sensations? *Food Qual. Prefer.* 85 (2020), 103956, <https://doi.org/10.1016/j.foodqual.2020.103956>.
- [385] Michel Visalli, M.V. Galmarini, Multi-attribute temporal descriptive methods in sensory analysis applied in food science: Protocol for a scoping review, *PLoS One* 17 (7 July) (2022), <https://doi.org/10.1371/journal.pone.0270969>.
- [386] Michel Visalli, M.V. Galmarini, A template to share sensory evaluation data, 2023, <https://doi.org/10.57745/B35XCS>.
- [387] Michel Visalli, P. Schlich, B. Mahieu, A. Thomas, M. Weber, E. Guichard, First steps towards FAIRization of product-focused sensory data, *Food Qual. Prefer.* 104 (2023), 104765, <https://doi.org/10.1016/j.foodqual.2022.104765>.
- [388] Michel Visalli, T. Wakihira, P. Schlich, Concurrent vs. immediate retrospective temporal sensory data collection: a case study on lemon-flavoured carbonated alcoholic drinks, *Food Qual. Prefer.* 101 (2022), 104629, <https://doi.org/10.1016/j.foodqual.2022.104629>.
- [389] M. Visalli, M.V. Galmarini, Checklist for reporting research involving descriptive sensory evaluation methods - Sensory evaluation, 2023, <https://doi.org/10.57745/JUJRTJ>.
- [390] T.B. Wagoner, H.R. McCain, E.A. Foegeding, M.A. Drake, Food texture and sweetener type modify sweetness perception in whey protein-based model foods, *J. Sens. Stud.* 33 (4) (2018), e12333, <https://doi.org/10.1111/JOSS.12333>.
- [391] Ty B. Wagoner, E. Çakır-Fuller, R. Shingleton, M.A. Drake, E.A. Foegeding, Viscosity drives texture perception of protein beverages more than hydrocolloid type, *J. Texture Stud.* 51 (1) (2020) 78–91, <https://doi.org/10.1111/JTXS.12471>.
- [392] T. Wakihira, S. Miyashita, M. Kobayashi, K. Uemura, P. Schlich, Temporal Dominance of Sensations paired with dynamic wanting in an ad libitum setting: a new method of sensory evaluation with consumers for a better understanding of beer drinkability, *Food Qual. Prefer.* 86 (2020), <https://doi.org/10.1016/J.FOODQUAL.2020.103992>.
- [393] Q.J. Wang, B. Mesz, P. Riera, M. Trevisan, M. Sigman, A. Guha, C. Spence, Analysing the impact of music on the perception of red wine via temporal dominance of sensations, *Multisens. Res.* 32 (4–5) (2019) 455–472, <https://doi.org/10.1163/22134808-20191401>.
- [394] Q.J. Wang, T. Niaura, K. Kantono, How does wine ageing influence perceived complexity? Temporal-Choose-All-That-Apply (TCATA) reveals temporal drivers of complexity in experts and novices, *Food Qual. Prefer.* 92 (2021), 104230, <https://doi.org/10.1016/J.FOODQUAL.2021.104230>.
- [395] G. Watanabe, M. Motoyama, K. Orita, K. Takita, T. Aonuma, I. Nakajima, A. Tajima, A. Abe, K. Sasaki, Assessment of the dynamics of sensory perception of Wagyu beef strip loin prepared with different cooking methods and fattening periods using the temporal dominance of sensations, *Food Sci. Nutri.* 7 (11) (2019) 3538–3548, <https://doi.org/10.1002/FSN3.1205>.
- [396] G. Watanabe, H. Ohmori, K. Tajima, Y. Sasaki, Y. Wakiya, M. Motoyama, I. Nakajima, K. Sasaki, Relative contribution of sensory characteristics for different types of pork loin, assessed by temporal dominance of sensations, *J. Sci. Food Agric.* 99 (12) (2019) 5516–5525, <https://doi.org/10.1002/JSFA.9813>.
- [397] M.N.R.P. Weerawarna, A.J.R. Godfrey, A. Ellis, J. Hort, Comparing temporal sensory profile data obtained from expert and consumer panels and evaluating the value of a multiple sip TCATA approach, *Food Qual. Prefer.* 89 (2021), 104141, <https://doi.org/10.1016/J.FOODQUAL.2020.104141>.
- [398] N.R.P.M. Weerawarna, A.J.R. Godfrey, A. Ellis, J. Hort, Effect of sipping method on sensory response to single and multiple sips of vanilla milkshake using temporal-check-all-that-apply, *J. Sens. Stud.* 37 (5) (2022), <https://doi.org/10.1111/JOSS.12778>.
- [399] J.D. Wilkin, K. Ross, T. Alric, M. Hooper, J.V. Grigor, B.S. Chu, Optimisation of Concentration of *Undaria pinnatifida* (Wakame) and *Himathalia elongata* (Sea Spaghetti) Varieties to Effect Digestibility, Texture and Consumer Attribute Preference, *J. Aquat. Food Product Technol.* 30 (8) (2021) 932–943, <https://doi.org/10.1080/10498850.2021.1958114>.
- [400] C.A. Withers, M.J. Lewis, M.A. Gosney, L. Methven, Potential sources of mouth drying in beverages fortified with dairy proteins: a comparison of casein- and whey-rich ingredients, *J. Dairy Sci.* 97 (3) (2014) 1233–1247, <https://doi.org/10.3168/JDS.2013-7273>.
- [401] C. Withers, C. Barnagaud, P. Mehning, S. Ferris, D.M.H. Thomson, Adapting and enhancing sequential profiling to understand the effects of successive ingestion, using the sensory characteristics of high intensity sweeteners as a case study, *Food Qual. Prefer.* 47 (2016) 139–147, <https://doi.org/10.1016/J.FOODQUAL.2015.03.012>.
- [402] A.Z. Wu, R.W. Lee, B. Le Calvé, I. Cayeux, Temporal profiling of simplified lemonade using temporal dominance of sensations and temporal check-all-that-apply, *J. Sens. Stud.* 34 (6) (2019), <https://doi.org/10.1111/JOSS.12531>.
- [403] Y. Xu, N. Hamid, D. Shepherd, K. Kantono, S. Reay, G. Martinez, C. Spence, Background soundscapes influence the perception of ice-cream as indexed by electrophysiological measures, *Food Res. Int.* 125 (2019), <https://doi.org/10.1016/J.FOODRES.2019.108564>.
- [404] Y. Xu, N. Hamid, D. Shepherd, K. Kantono, C. Spence, Changes in flavour, emotion, and electrophysiological measurements when consuming chocolate ice cream in different eating environments, *Food Qual. Prefer.* 77 (2019) 191–205, <https://doi.org/10.1016/J.FOODQUAL.2019.05.002>.
- [405] N. Yang, Q. Yang, J. Chen, I. Fisk, Impact of capsaicin on aroma release and perception from flavoured solutions, *LWT* 138 (2021), <https://doi.org/10.1016/J.LWT.2020.110613>.
- [406] A.K. Young, J.N. Cheong, K.D. Foster, D.I. Hedderley, M.P. Morgenstern, B.J. James, Exploring the links between texture perception and bolus properties throughout oral processing. Part 1: Breakdown paths, *J. Texture Stud.* 47 (6) (2016) 461–473, <https://doi.org/10.1111/JTXS.12185>.
- [407] A.K. Young, J.N. Cheong, D.I. Hedderley, M.P. Morgenstern, B.J. James, Understanding the link between bolus properties and perceived texture, *J. Texture Stud.* 44 (5) (2013) 376–386, <https://doi.org/10.1111/JTXS.12025>.
- [408] L.L. Zhang, S.S. Xu, B.L. Shi, H.Y. Wang, L.Y. Liu, K. Zhong, L. Zhao, Z.X. Chen, Evaluation of the pungency intensity and time-related aspects of Chinese *Zanthoxylum bungeanum* based on human sensation, *J. Sens. Stud.* 33 (6) (2018), e12465, <https://doi.org/10.1111/JOSS.12465>.
- [409] L. Zhang, B. Shi, H. Wang, L. Zhao, Z. Chen, Pungency evaluation of hydroxyl-sanshool compounds after dissolution in taste carriers per time-related characteristics, *Chem. Senses* 42 (7) (2017) 575–584, <https://doi.org/10.1093/CHEMSE/BJX038>.
- [410] H. Zhou, Y. Zhao, D. Fan, Q. Shen, C. Liu, J. Luo, Effect of solid fat content in fat droplets on creamy mouthfeel of acid milk gels, *Foods* 11 (19) (2022), <https://doi.org/10.3390/FOODS11192932>.
- [411] Y. Zhu, B. Bhandari, S. Prakash, Relating the tribo-rheological properties of chocolate flavoured milk to temporal aspects of texture, *Int. Dairy J.* 110 (2020), <https://doi.org/10.1016/J.IDAIRYJ.2020.104794>.
- [412] J. Zimoch, C.J. Findlay, Effective discrimination of meat tenderness using dual attribute time intensity, *J. Food Sci.* 63 (6) (1998) 940–944, <https://doi.org/10.1111/J.1365-2621.1998.TB15828.X>.
- [413] S. Zorn, F. Alcaire, L. Vidal, A. Giménez, G. Ares, Application of multiple-sip temporal dominance of sensations to the evaluation of sweeteners, *Food Qual. Prefer.* 36 (2014) 135–143, <https://doi.org/10.1016/J.FOODQUAL.2014.04.003>.
- [414] S.A. Zwillingner, B.P. Halpern, Time-quality tracking of monosodium glutamate, sodium saccharin, and a citric acid-saccharin mixture, *Physiol. Behav.* 49 (5) (1991) 855–862, [https://doi.org/10.1016/0031-9384\(91\)90194-5](https://doi.org/10.1016/0031-9384(91)90194-5).



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