Breaking Bread, Building Bridges: The Role of Food in Negotiation, Trust, and Conflict Resolution

by

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"*Food is national security. Food is craft. Food is everything*."
— Chef José Andrés

Abstract

Food transcends its biological necessity, serving as a powerful tool for fostering trust, resolving conflict, and building cooperation. This paper explores how gastronomy—through the universal act of sharing meals—shapes negotiation outcomes and conflict resolution by leveraging biological, psychological, and cultural mechanisms. Drawing on interdisciplinary insights from economics, anthropology, evolutionary psychology, biology, and history, we argue that the deeply rooted evolutionary association between communal eating and trust manifests in immediate biological and behavioural changes, such as the release of "feel-good" hormones and enhanced social coordination.

Drawing on historical examples and contemporary practices, this paper then examines the transformative potential of shared meals in fostering trust and cooperation. From grassroots initiatives in gastro-diplomacy to their application in high-stakes negotiations, we explore how gastronomy serves as a bridge across cultural and political divides. Building on this foundation, we present a practical framework for incorporating shared meals into conflict resolution processes, with a specific focus on addressing trust deficits in negotiations, such as the protracted Ukraine-Russia conflict. The paper concludes by emphasizing the strategic integration of culinary practices into diplomacy, advocating for shared meals as a vital yet underutilized tool for creating enduring peace and collaboration.

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"*You learn a lot about someone when you share a meal together*."
-- Anthony Bourdain

1. Introduction

1.1 The power of food and feasting

Food is politics. Food is culture, nurture, and belonging but also a means of exclusion, cultural supremacism, and a weapon of war. In August 2023, the United Nations Security Council echoed this unity of opposites, emphasizing the power of food to unite, while criticizing the continued use of weaponized hunger in current conflicts.

Food is economics, from the Greek word *oikonomia* (ο'ικονομία), it embodies the origins of exchange and trade between households, communities, and States. Food is the ultimate symbol of status, poverty, inequality, and excess. Elites signal their power by living extravagantly, attempting to broadcast their elevated taste and prestige (Veblen, 1899). Being seen at the most exclusive restaurants, demonstrating our knowledge of rare vintages, or broadcasting our kitchen prowess and culinary adventures on Instagram are projections signalling of elevated status and culture. The provocative "Let them eat cake!", attributed to Marie Antoinette, symbolizing the lavishly oblivious aristocracy is (erroneously) believed to have instigated the French Revolution.

Food and feasting have sculpted this world and its systems over millennia, responsible for the current power structure and alliances, from ancient trade routes in continuous search for new and exotic fruits, spices, and delicacies (Pascali, 2017), enslaving nations in the production of what were once rare and expensive foods - now so cheap and common place in the Global North that they often end up within the oceans of food waste.

Ritual feasting generated a strong demand for prestigious items, and thus was likely the key driver of a range of technologies including the domestication of wild plants and animals, food preparations and preservations, pottery, brewing, calendars, and record keeping (Hayden 2014). While refined wheat, sugar, and animal fats were once reserved only for the elite or special occasions, they are now more accessible than fresh "organic" fruits, vegetables, and meats (now elite foods), leading to what is currently referred to as the "double burden" of food insecurity, namely the concurrent existence of both obesity and starvation.

Food and feasting have been used to gain, maintain, and demonstrate power ubiquitously and throughout history. Dinner parties and banquets have been used by ambitious individuals as a strategy to achieve social, economic, or political advantages and dominance (Hayden 2014). This is more than a costly signalling strategy, where, like a peacock's tail, surplus food energy is converted into showy feathers. For humans, food is transformed into relationships and long-lasting alliances. The sense of belonging or exclusion can be

generated through food, including aspects of etiquette and taboo, as a construction and expression of sociocultural identity (Lévi-Strauss, 1958, Barthes 1961, Douglas, 1966).

Food embodies ever shifting cultural norms and beliefs, an idea introduced by the French scholar Claude Lévi-Strauss in 1962 that what is “good to think” (bon à penser) continues to determine what is “good to eat” (bon à manger) where “food must nourish people’s collective mind — i.e. their systems of values, beliefs, and traditions — to be considered suitable for their stomachs” (Stano and Bentley, 2021). Contrariwise, foods and ways of eating that are taboo and associated with unfriendly foreigners may provoke disgust.

1.2 Trust, Faith, and Institutions

There is no widely accepted definition of trust, although it is frequently discussed in social sciences including in psychology, sociology, and economics. Oxford defines trust as: “to have confidence in somebody; to believe that somebody is good, sincere, honest, etc.”

This paper does not adopt any specific definition of trust, but rather illustrates how the meaning of the word has been used and evolved over time. The word trust, similar in meaning to faith and related to truth, derives from the Proto-Indo-European root *dreu-*, meaning "be firm, solid, steadfast," from the Sanskrit *dru* "tree, and is related to the Greek *drys* "oak," Gothic *trausti* "agreement, alliance", Old Norse *traust* "help, confidence, protection, support" from c. 1300 as "reliability, trustworthiness; trustiness, fidelity, faithfulness;" from late 14c. as "confident expectation" and "that on which one relies."[2] From the early 15c. onwards, we begin to see the use in the legal sense of "confidence placed in a one who holds or enjoys the use of property entrusted to him by its legal owner;" mid-15c. as "condition of being legally entrusted." The meaning "businesses organized to reduce competition" is recorded from 1877.

During this evolution in language, there was a parallel evolution in the development of increasingly formalized institutions that initiated with urbanization and the management of surplus by the elite (Redmond, 2008).[3] Some scholars have even drawn a correlation between the development of complex institutions and the type of surplus, where civilizations that cultivated grains, which could be more easily collected and stored for repurposing by the elites, developed stronger and more formalized complex institutions than those cultivating tubers, for example (Mayshar *et al*, 2022).

As Harari succinctly explains in *Homo Sapiens*, to have cooperation amongst large groups, it was critical for the population to have faith in a common ancestor, or shared beliefs and myths. Shared myths gradually became shared political beliefs or moral values after the enlightenment and separation of Church and State.

[2] Online Etymology Dictionary: https://www.etymonline.com/word/trust

[3] Formal Institutions in Historical Perspective: https://www.jstor.org/stable/25511343

According to economist Steve Knack of the World Bank, "If you take a broad enough definition of trust, then it would explain basically all the difference between the per capita income of the United States and Somalia." Knack has been studying the economics of trust for over a decade.[4] An article from Forbes puts forth an interesting discussion on the pros and cons of institutionalized, or formal, trust versus personal trust, which the author calls "the touchy-feely type", noting that while the institutionalized trust may seem cold, personal trust has been shown by social experiments to be dispensed unequally, depending on race, gender, or charm, and can be more associated with political patronage or a criminal mafia.

The article suggests that where there are strong formal institutions, informal institutions and interpersonal trust are weak, and, where there are limited formal institutions (in certain neighbourhoods of the US or countries like Somalia), interpersonal trust and informal institutions are all you have. A similar finding was made in Acemoglu et al (2014).

But, even in the Global North, formal institutions can fail, markets can crash, the law can fail to protect victims of crime, companies can default on contracts and bypass environmental and health policies, States can ignore the Paris Agreement or the Universal Declaration of Human Rights, and nations can go to war. Modern formal institutions are beginning to lack a common faith, a belief in a common good with the power to unite.

During Christmas 1914, despite Europe being at war, British and German soldiers left their trenches to exchange gifts, play games, and bury their dead. Now, in the West, surveys show that over the last five decades, few people say they trust one another. Where there are strong shared beliefs, there can be trust and peace even during war, and without them, there is mistrust and war even during times of peace.

1.3. Breaking Bread, Gastronomy, and Building Trust

When we talk about trust, we are talking about building a relationship with our negotiating partners; we mean an opportunity to literally see eye-to-eye on a matter of contention. It is not about blind faith, utopian enthusiasm, or a warm and fuzzy notion that because parties break bread, they will suddenly make peace. But, sharing a meal can establish a level-playing field, some truth on an individual level, regarding the intentions of the other party to reach a deal.

The art of feasting is the oldest political, cultural, and social institution and remains a powerful tool today. It is important to note that sharing a meal "finds trust, where there is trust to be found" in the sense that, where there is no trust to be found, sharing a meal may help to establish it. However, despite the fear of the contrary, most humans want to cooperate, and thus the majority of the time, sharing a meal will increase trust.

[4] Forbes: The Economics of Trust (2010). https://www.forbes.com/2006/09/22/trust-economy-markets tech_cx_th_06trust_0925harford.html?sh=37d946082e13.

Recently, there has been renewed attention towards the role of gastronomy in negotiation and conflict resolution. This can apply to conflicts more broadly, exemplified by current grass-roots political initiatives in gastro-diplomacy such as Conflict Kitchen[5] or the cookbook by the Israeli-Palestinian chef duo Yotam Ottolenghi and Sami Tamimi, *Jerusalem* (2012), that explore the role of food as a vehicle for discovering the similarities in the traditions of communities in conflict. The concept can also be applied to specific negotiations and processes and the real or perceived role that gastronomy plays in their outcomes.

We aim to contribute to this evolving discussion around gastro-politics, culinary diplomacy, and the role of food and dining in negotiation and conflict resolution by offering a plausible explanation on the mechanisms behind the power of food and feasting to unite parties and form long-lasting bonds and alliances.

While we agree that sharing a meal, and especially sharing plates (family style dining), promotes cooperative behaviour and enables the release of the feel-good hormones such as endorphins, dopamine, and oxytocin, we strive to go deeper into the underlying driver of these effects on the body.

Evolutionary biologists argue that for every biological function, there is an evolutionary justification – that those of our ancestors who ate together, survived.

1.4 Roadmap

We now briefly outline the rest of the paper. In Section 2, we discuss how trust improves negotiation outcomes and facilitates conflict resolution. In Section 3 we draw on evolutionary psychology, in particular, to argue that sharing a meal fosters trust and social bonding.

Section 4 draws examples from the ancient and modern global historical record that exemplify how feasting and sharing meals has and continues to be used – both actually and as a myth - ubiquitously to build trust, forge alliances, and resolve conflict.

In Section 5 we demonstrate – in the context of the current Ukraine-Russia conflict - how specific principles of trust development using gastronomy could be applied to address persistent "stalemate" negotiations, where lack of trust is a key contributing factor.

Section 6 concludes with further remarks and future research.

2. Trust and cooperation

Trust is a central concept in the increasingly cited claim that "breaking bread" together fosters greater cooperation and increases the likelihood reaching of agreement in a negotiation. This

[5] Conflict Kitchen operates out of Pittsburgh in the United States, serving food from countries that the US is in conflict with and offering opportunities for cultural exchange. For more information, please visit: https://www.conflictkitchen.org/

section draws upon literatures in economics and discusses how and why trust helps enhance cooperation and its role in negotiations.

2.1. What is trust and why does it matter?

Economists are interested in trust especially because of its role in fostering cooperation. In negotiating deals, economic agents are cooperating and coordinating their behaviour to achieve a larger collective good than would otherwise occur. Even though the parties can greatly benefit from an agreement, achieving one can be tricky. A participant knows more about themselves than the other participant, and can, unilaterally, renege on what has been agreed upon. For example, only the seller knows the true value of the product that she is selling, and whether she will deliver the product that a customer has paid for. These are examples of informational asymmetries and commitment problems, respectively, and we will discuss these in more detail below.

Trust alleviates and mitigates both problems and increases the chances that the negotiating parties reach agreement. In other words, trust is a pre-requisite for cooperation, and this is a central reason why trust is of immense interest. Many economic experiments have established that trust, in one form or another, is positively related to increased cooperation (see, e.g., Cardenas et al. 2009; Gächter et al. 2004; Chaudhuri 2011; Glaeser et al 2000; Fehr and Gächter, 2002; Bellemare and Kroger 2007 and Zhang and Chaudhuri, 2019)[6]. As Bauer et al. (2019) point out, not all studies establish this connection. However, it is noteworthy that this is mostly confined to cases where trust is proxied by answers obtained from questions in surveys like the General Social Survey (GSS) or the World Values Survey (WVS)[7].

If we can identify where it is possible to achieve cooperation, we are almost invariably also identifying possibilities for sustaining trust. And conversely, where cooperation is impossible, this will frequently be because of the inability to generate trust in that environment (Hanfield, 2020). But trust also has its darker side: It opens us up to exploitation (Baier 1986). As Seabright (2010) puts it, one is always concerned (at least deep down) about being "stabbed in the back" at some point in the process of cooperating with others.

Legal contracts exist, in a way, to provide a surrogate mechanism to moderate the need for trust but they are a highly imperfect mechanism that does not work in all circumstances. This is due to a whole host of reasons such as the (huge) costs of legal enforcement and/or the non-verifiability of some actions that make legal enforcement infeasible. A fundamental

[6] These studies focused on cooperation in the context of investments into a public good.

[7] Trust surveys collect information about the general level of trust among a sample of people. It has been noted in the literature that survey-based measures of trust are too vague to interpret accurately (E.g. Glaeser et al. 2000; Sapienza et al. 2013; Bauer et al. 2019). To address the ambiguity in interpreting survey questions, many authors have resorted to 'trust games' to obtain measures of trust and trustworthiness (Berg et al. 1995). Another possibility is for the experimenter to design their own questions that aim to capture a participant's beliefs or expectations about the behaviour of their opponent. (E.g., Sapienza et al. 2013, Bellemare and Kroger (2007), also Gambetta for an earlier contribution, 1988).

requirement for the existence and/or the proper functioning of markets is the presence of some degree of trust; the legal provisions and laws are not sufficient (see, e.g., Arrow, 1974). Indeed, while the legal framework and other formal institutions provide the formal infrastructure to help people cooperate, informal institutions and social norms play an important role in facilitating the process and helping generate the necessary degree of trust.

In this paper, we are mainly focused with *negotiations* as a form of cooperation. In any negotiation, there are two pertinent questions, namely, that of *efficiency* (whether the agreement is reached) and that of *distribution* (how the 'pie 'is divided). Our central claim is that breaking bread together can increase, non-trivially, the likelihood (or probability) that agreement is reached in negotiations. It thus speaks to the efficiency question of negotiations.

In the following, we build the case for how trust can improve the chances of reaching an efficient outcome in negotiations as well as discuss two main impediments to reaching an outcome. That is, we will explain how the presence of informational asymmetries and commitment problems can decrease the likelihood of agreements being reached, and how the experimental literature has presented trust as a solution to these problems.

2.2. Informational Asymmetries, Inefficiency and Breakdowns

It was George Akerlof's now classic 1970 "Lemons" paper that first introduced the idea to Economics that informational asymmetries can cause market failure, or even market collapse; a breakdown, if you like, in a negotiation.

Akerlof's revolutionary insight was illustrated in the context of a used cars market as follows: There are buyers and sellers of used cars in a market. The true quality of a car is only known to its seller, that is, it is the seller's "private" information. This creates an informational asymmetry between the seller and the buyer. Furthermore, the seller of a "lemon" (i.e., a low-quality used car) has an incentive to pretend to own a "peach" (i.e., a high-quality used car) to command a higher price for her car. The buyer is cognisant of all of this, and factors it in her calculus.

Due to the informational asymmetry, the maximum that the buyer is willing to pay is based on her estimation of the *average* quality of the cars in the market. This is lower than the price a "peach" seller would like to obtain. As a result, sellers of good quality cars leave the market and the average quality in the market decreases. Consequently, the price that the buyer is willing to pay decreases; hence, "peaches" disappear from the market. It is easy to see that, gradually, the sellers of the good quality cars leave the market altogether. The market thus either collapses, if the maximum is below the minimum price acceptable for a lemon owner, or it fails, i.e., trade occurs but only lemon cars will be bought and sold. In conclusion, the information asymmetry has implied a non-trivial decrease in the likelihood of reaching an agreement, or of consummating the mutual beneficial gains from cooperation. This is an inefficient outcome.

Following Akerlof's seminal work, a huge literature developed in Economics that established this very kind of reasoning in negotiation contexts and processes. in the presence of informational asymmetries between participants, the likelihood of reaching agreement in a negotiation is non-trivially decreased. See, for example, Myerson and Satterthwaite (1983) and Rubinstein (1985), or, for a summary of this fundamental insight, see chapter 9 in Muthoo (1999).

2.3. Commitment Problems and Inefficiency

Trust and what are known as "commitment problems" are inextricably linked with each other. Both concern interaction over time and promises about future actions. A powerful contribution to the commitment problem is made by Schelling (1960). Indeed, the fact that a party anticipates the other party to be able to almost costlessly renege on her promises (*ex-post*, in the future) implies that there will be no agreement (*ex-ante*, now) in the negotiation.

Consider King John who faced a "commitment", or a "credibility" problem, when confronted by the English barons in May 1215 in Runnymede (near London) about taxes. The King promised not to raise taxes in the future, but the barons were suspicious. It would be easy for the King to renege on his promises when deciding about the taxes in the future. The problem was apparently resolved when John agreed to sign the Magna Carta. This allowed him to establish some credibility. After all, it was believed that no King would default on what they had officially signed up to. But thanks to a loophole, he was able to go back on his words. The Pope – as God's representative on Earth – annulled the signature because he believed that the King had signed the contract under duress. For interesting discussions of many other such "commitment problems" – and the ways (institutional mechanisms) that have been created to try to solve them – see Acemoglu and Robinson (2012).

In some cases, commitment problems are due to incomplete contracts. Incomplete contracts arise because it is impossible to write a contract to cover all possible contingencies that may arise in the future. As a result, one of the contracting parties may have the possibility to "hold up" the other one, e.g., take advantage of an ex-ante investment which effectively binds the latter into the contract (because leaving the relationship may be even costlier due to a relationship-specific investment, for example). It is difficult to credibly commit, *ex ante*, to not "holding up" the other party because when the opportunity arises, it will be profitable to go ahead with it. To alleviate "hold up" problems within and between firms, Hart (1995) has proposed specific asset ownership structures. If designed appropriately, incomplete contracts may allow some degree of efficiency and cooperation.

2.4 Empirical literature on trust and negotiations

One of the ways in which trust influences negotiations is through negotiations tactics. Many experimental studies have established that trusting your opponent prompts you to share more information. This is valuable, because it can lead to the discovery of new, higher joint

gains, i.e., increase the size of the 'pie 'to be shared[8]. In a way, trust allows the negotiating parties to overcome the problem of asymmetric information and improve the outcome for both, should an agreement be reached.

In Butler (1999), two buyers are both wishing to buy up all 100 'ugly 'oranges on sale. After exchanging information, they learn that one of them needs only the juice and the other one the rinds. The buyers can now both have what they want so a mutually beneficial deal can be achieved. This is clearly a (Pareto) improvement in comparison to an outcome where, in the absence of information sharing, one of the buyers would have acquired all the oranges. Gunia et al. (2011), Olekans et al. (2007), Kimmel et al. (1980) are also examples of studies where information sharing led to better joint payoffs for the negotiators[9].

Experimental studies have also shown that higher trust levels contribute to an increased likelihood that an agreement is reached (McCannon et al. 2018; Ben-Ner and Putterman 2009), to an increased likelihood of entering a contract in low-enforceability environments (Bohnet et al. 2001) and to a reduction of transaction costs and the complexity of contracts (Butler 1999). These studies validate our proposition that increasing trust increases the likelihood of reaching agreement in a negotiation.

5. Conclusion: Trust implies Efficiency

In sum, thus, building trust can mitigate the adverse impacts that arise from informational asymmetries and from commitment problems. Hence, trust increases the likelihood of reaching agreement, in negotiations.

3. The cultural, psychological, and biological mechanisms at work when sharing a meal

In the previous section, we have demonstrated that trust improves negotiation outcomes and is therefore desirable to cultivate. In this section, we aim to explore the role that culture, biology, behavioural psychology, and evolution play in trust-building and human bonding and within that, the role of food and sharing a meal.

Social scientists and economists have, in the last few decades, improved our understanding of the external determinants of trust through experiments and analyses using game theory to explore trust in social interaction and cooperation (cf., eg, Alós-Ferrer and Farolfi, 2019).

[8] A large literature in organisational and management science has reported similar findings, namely, that negotiation strategies relying on information sharing ('Q&A' or 'integrative' strategies) lead to better negotiation outcomes. In contrast, 'S&Q' or 'distributive' strategies are characterised by attempts to influence the counterpart to make concessions by using threats and emotional appeals, and single issue offers, and typically lead to weaker negotiation outcomes. See, e.g., Brett and Thomson (2016) for a survey on this literature. Relatedly, Elahee and Brooks (2004) report that trust reduced dishonest, deceptive, and opportunistic behaviour in Mexican business negotiations.

[9] A contrary finding was reported by Brañas-Garza et al. (2023) whose experiment didn't detect any impact of pre-play communication and/or food and drink consumption on negotiation outcomes.

There has likewise been a recent flourishing of interest and social experiments on the use of gastronomy in negotiations (Cf, eg, Zitek and Jordan, 2023; Wolley and Fishbach, 2019). However, the underlying mechanisms of trust, cooperation, and bonding have remained opaque in these studies.

We will argue that the real mechanism underlying improved negotiation outcomes runs much deeper than the behavioural aspect of increased coordination leading to cooperation, and that although a complex neurobiological and hormonal response is fully at work in the food-trust nexus, this is ultimately a manifestation of a deeply embedded evolutionary instinct to trust individuals with whom we share a meal.

3.1 Biological basis of trust in humans

When we eat or share a meal with others, there are a multitude of complex biological changes that happen in our brains. The outward manifestations of these changes include a shift from feelings of agitation, stress, selfishness, and entitlement to relaxation, moderation of appetite and emotions, feelings of pleasure, and increased closeness to others. This shift may be triggered by increased glucose levels as well as our "feel good" hormones, serotonin, endorphins, dopamine, and oxytocin, which are released when we eat, and by a magnitude that increases with various gastronomic factors[10] including flavour and appearance of the food, as well as the ambiance and table wear.

Being hungry appears to have the opposite effect on trust and bonding, leading to individualistic sentiments and a sense of entitlement. Two experiments carried out by Zitek and Jordan (2023) at Cornell and Dartmouth College found that an empty stomach interferes with negotiations in this way, because a person who feels entitled and more deserving of positive outcomes than others is more likely to be dishonest and overlook the needs of others. Even on an individual level, simply being hungry can lead us to overlook important opportunities, potential trade-offs, or new sources of value.

Another recent study that has received a lot of attention, including mentions and articles in the Economist, CNBC, and NATO Blogs, is the "Shared Plates" study by Kaitlin Woolley of Cornell University and Ayelet Fishbach of the University of Chicago (2019), who found that people, even strangers (not just allies), cooperate more and have better negotiation outcomes when eating from shared plates than those eating from separate plates. The mechanism, they argue, is increased coordination required in "family-style" dining, where food is served from a shared dish than in French-style dining where each has their own plate. This coordination, they say, predicted feelings of collaboration during the negotiation phase of the study.

[10] The study of gastronomy includes the physical attributes of the food consumed including flavour and appearance, as well as cultural aspects such as how the food is served, the table wear, and the environment, as well as the social considerations including the type and number of guests, the seating arrangement and the etiquette employed.

The above study follows an experiment conducted in 2013, published in the Harvard Business Review by Lakshmi Balchandra, which found that when parties shared a meal during negotiations at a restaurant, the value of outcomes increased by 12%. Her initial hypothesis that trust was the main driver was ruled out by a post-study survey but it's possible that respondents were thrown off by word "trust", which may illicit an avoidance to the warm and fuzziness association that is "unbusinesslike". The role of increased coordination was also ruled out with a counter-experiment where she had subjects share a common task, in this case completing jigsaw puzzles, which had no meaningful effect. She posits that there may be biological factors at work, including glucose levels that regulate self-control, prejudice and aggressive behaviors, or psychological factors including unconscious mimicking behaviors that can lead to increased pro-social behaviors.

Glucose levels are likely a necessary (Zitek and Jordan, 2023) but insufficient explanation for why eating together increases negotiation outcomes while unconscious mimicking behaviour is ubiquitous in most social interactions – not just during shared meals. There is another biological factor – our "feel good hormones", namely oxytocin, endorphins, serotonin, and dopamine, that regulate all of our most primal behaviours including eating, coupling, childbirth, breastfeeding, and emotional bonding (Bick et al., 2013).

Of the feel-good hormones, oxytocin has been most associated with regulating trust and social bonding although in other cases the endorphin system has been considered the principal psychopharmacological mechanism that underpins primate and human social bonding (Dunbar 2017). The exploration though of oxytocin and trust has received the most attention (Zak et al, 2005; Zak, 2017). Promising research by Shou et al. (2022) has yielded findings based on a sub-classification– general trust, beliefs about the trustworthiness of others, and caution, the belief that caution is needed when dealing with social uncertainty, finding a positive association of oxytocin with the regulation of caution rather than general trust.

Another study from Kosfeld (2007), combining game theory with decision-making analysis of the human brain, not only demonstrates a substantial increase in trust after intranasal oxytocin, but a subsequent increase in benefits from social interactions, finding that oxytocin ameliorates willingness to accept social risks arising through interpersonal interactions and not a general increase in the readiness to bear risks or more optimistic about others' trustworthiness. Another study by Zak (2017), found higher levels of oxytocin in employees who had just made decisions to trust than those who had been more cautious. Fewer studies have been carried out on humans, but the role of food sharing and levels of oxytocin in animals, one study by Wittig et al. (2014) found that food sharing is linked to higher oxytocin levels and thus bonding in both related and unrelated wild chimpanzees.

Although numerous, animal and human studies are inconclusive on how oxytocin affects trust and social bonding (eg, Kosfeld, 2007*).* Despite its nicknames such as the "cuddle", "love", or "trust" hormone, oxytocin in recent studies has been shown to be more of a

“volume” hormone, amplifying emotions that are already present depending on the circumstances. However, most agree that under the right circumstances, oxytocin has the power to regulate trust, empathy, bonding, and communication (Wang et al., 2019).

The key may be that oxytocin is often released in conjunction with two other feel-good hormones more directly associated with eating: serotonin and dopamine. For example, Thanarajah et al. (2018) find that the brain rewards with dopamine not just once but twice during the act of eating – first when the food is consumed and again when it reaches the stomach. It is therefore likely that oxytocin’s role in bonding cannot be examined independently from the other feel-good hormones that, together, may form a sort of synergetic “bonding cocktail”.

3.2 Evolutionary Psychology and Trust

While confirming the role that hormones and endocrinology play, Riedl and Javor (2012), in their investigation into the biology of trust, find that trust behaviour is at least moderately, genetically predetermined. This finding may not be entirely surprising considering that evolutionary psychology argues that many of our social and psychological characteristics were formed during our time as hunter-gatherers (IEP, 2024; Narvaez, 2017).

Although trust and cooperation are fundamental to the success of the human species, their evolution is poorly understood. We do know however that evolution favoured those capable of forming strong social bonds, whether at the nuclear family level as a prerequisite for the division of labour, or between tribes and civilizations.

Although the exact origins of food sharing by early humans remains a fundamental issue in Palaeolithic archaeology, certain evidence indicates that this behaviour could date as far back as 2.6 million years (Alger et al., 2023). Jaeggi and Michael (2013) demonstrate that food sharing can be explained by reciprocity, an instinctive strategy to ensure that by giving food now, you will have food in the future when you need it: "*Our findings support the idea that actions that benefit another individual tend to, ultimately, also benefit the giver -- either because the recipient is genetically related to the giver or will eventually return the favor*". Thus, food sharing is part of the formation of long-term relationships and emotional attachments that humans have evolved through natural selection. Reciprocity as a form of cooperation could be viewed as trust in practice, or as an activity that demonstrates an underlying trust.

As societies became more complex, food sharing became an instrument for alliance building not only among individuals, but between tribes and chiefdoms. According to Deitler and Hayden (2001) feasts had a fundamental role in building alliances through generating strong social bonds and forming relationships of reciprocal obligation. From an archaeological perspective, Hayden (2014) argues that geographically dispersed alliances were critical for human survival in times of severe resource stress and that rituals, in particular feasts, that led to ecstatic states and feeling of unity, generated almost unbreakable emotional bonds

that led to enduring alliances. Again, both on the individual and community level, gift-receiving seems to trigger an innate sense of obligation, especially food (Hayden, 2014).

A recent study supports this important role of feasting, using multi-isotope analysis that brings new evidence that feasting near Stonehenge during the late Neolithic period (~2800 – 2400 BCE) brought together people and animals from throughout Britain, marking the beginning of pan-British connectivity (Madgwick et al., 2019). The authors analyse the bones of 131 slaughtered and roasted pigs from this period and discover wide-ranging origins of the animals. Until recently, fats and high carbohydrate foods were not common in the human diet, and so the provision of large quantities of pig meat, dairy, starches, and sugars, never mind alcohol, would have triggered strong dopamine or endorphin release generating feelings of well being and bonding among participants.

This could also in part be driving the results of a recent analysis of UK household survey data by Dunbar (2017), which suggests a causal direction running from eating together and bondedness, rather than the other way around. He suggests therefore that eating together may have evolved as a mechanism for social bonding. He finds also that evening meals have a stronger effect on bonding and building friendships than daytime meals. This could be connected to the shift of social time to the evening after the controlled use of fire, when important evolutions in language, thought, art, and culture are said to have developed (Wrangham, 2010).

3.3 Summary Observations

Trust and bonding are facilitated by activities that simulate the social time of our ancestors, who for most of our history lived as hunter-gatherers in small communities. This reciprocal behaviour of food sharing, especially after days were extended with the taming of fire, enabling the innovation of cooked foods followed by language, art, and myth, ensured that tribes, communities, and civilizations prevailed against individual and localized shocks. Thus, these characteristics are deeply etched in our minds and nervous system through evolution. They manifest through neurological and chemical reactions in our bodies, including the release of dopamine, endorphins, and oxytocin, or through mimicking behaviour and result in improved coordination and problem solving.

4. Applications of gastronomy in negotiations and conflict resolution

In Section 3, we explored the trust-building mechanisms at work while sharing a meal. Immediate biological changes that occur through blood sugar and hormones, psychological changes through coordinating behaviour – especially when sharing food from the same plate, and instinctual behaviour is determined by natural selection of those capable of forming strong emotional and social bonds. We also noted the causal direction of human bonding created by sharing a meal, which is more meaningful when taking place in the evening.

We now discuss how gastronomy has been used in more recent history in negotiations, mediation, and conflict resolution including through the use of ritual and drawing on cultural norms of reciprocal obligation.

4.1 Rituals and Feasts

As humans evolved, the ritual of food sharing became more complex, increasingly augmented with meaning and symbolism. In the world of post-conflict reconstruction and conflict mediation, the power of ritual in peace building and mediation is well acknowledged and dates to structuralist approaches developed by anthropologist Turner (1969) and then Van Gannep (2004).

Davidheiser, in following the ritual process approach, finds the efficacy of mediation is linked to the creation of a liminal space where social conventions are loosened, thereby enabling personal and social transformation. Examples from ethnographic literature attest to this as ritualization as a common feature of peace making in almost all societies and food and drink figure strongly among such rituals.[11]

Examples of peacebuilding often center on the serious, rational negotiations and formal problem-solving efforts in conflict situations. Schirch (2005) argues, though, that what truly bonds adversaries and helps achieve peace are the symbolic, non-verbal ritual – shaking hands, sharing a meal, showing a photograph of a loved one. Yet these are often overlooked as deliberate components of peace negotiations. *Ritual and Symbol in Peacebuilding* underscores the importance of incorporating symbolic tools, including ritual, into traditional approaches to conflict. Ritual assists in solving complex, deep-rooted conflicts, and helps to confirm and transform worldviews, identities, and relationships.

As discussed in the previous section, reciprocity, especially food sharing (which is unique to humans), is considered a strong driver of our evolutionary success and remains the foundation of many cultures' norms and etiquette. Food sharing is of particular importance because unlike other gifts, food is literally embodied, together with the social debt that it engenders (Deitler and Hayden 2001). The Ancient Greek word for the concept of hospitality *xenia*, which originates from the word *xenos*, meaning "stranger" emphasized and was an institutionalized relationship founded on reciprocity, where guests, especially strangers, are entitled to receive food before answering any questions or revealing their identity. Examples of similar customs can be found in many ancient and modern cultures. For example, the Arabic word 'karam', meaning generosity, includes the treatment of guests with the utmost kindness and honour, usually through food and sometimes gifts. This

[11] The Japanese Tea Ceremony for example was used in times of war, say during the Warring States period (1467-1572), when the daimyo fought for military/political supremacy, tea was used to create consensus and peace

custom is central as a way of building relationships and establishing trust, and its history is attributed to the Prophet Muhammed who gave and received gifts, most commonly food.

The Chinese concept of Guanxi is described as “relationships based on mutual dependence” (China- Mike, 2020), where dining and banqueting are considered essential platforms for establishing and strengthening these relationships. Guanxi is still as powerful today as in the past, and from the Chinese perspective, the main aim of negotiations is to build trust and focus on “creating a framework for long-term cooperation and problem-solving much more than on drafting a one-time agreement.” This long-term alliance building approach is more common in China, and perhaps East Asia in general. The importance of food and banqueting customs is such that “often the most pivotal information for advancing negotiations is conveyed over dinner” (Neidl, 2010).

4.4 The French: Gastronomy and Deal Making

Like with many things related to food and cooking, the French were pivotal in the development and application of gastronomy in the realm of politics. A paper presented at the Annual International Association of Conflict Management (Bobot, 2011), examines the “alliance of gastronomy and negotiation” with an historical approach, specifically French Foreign Minister Charles Maurice de Talleyrand and his use of gastronomy “as an influential context for negotiation, and dining as a metaphor for negotiation.” Bobot emphasizes Talleyrand’s influence at the Congress of Vienna in 1814–1815, where the latter negotiated a favourable settlement for France and devised a united front between France, England, and Austria, was persuasive behind the-scenes work, held during lunches and dinners at the Kaunitz Palace.

After Thomas Jefferson returned from serving in France as foreign minister in 1790, where early in his tenure (1785), he wrote on how the “pleasures of the table could unite good taste and temperance”, he hosted one of the most influential dinners in American history, known as the dinner table bargain that culminated in the passage of two highly contentious bills in the early history of the United Sates: the Residence Act and the Assumption Act [12]. Jefferson had likely adopted the French style of diplomacy and negotiation, while combining it with American sensibility and egalitarian sentiments, including serving plates family-style in the center of the table where guests served themselves and at round and oval tables (Klein, 2014).

In modern negotiations as well, frequently the real shifts happen outside of the formal discussions. During the SALT Negotiations, between the Soviet Union and the USA, the account of an American negotiator is clear about the fact that the informal exchanges

[12] locating the new capital city in what is now Washington DC, rather than a business or financial center such as New York or Philadelphia;, which would federalize all state debts and taxation, standardize the nation's accounts, and establish credit abroad. However, its critics (especially Virginians) saw the debt holders as corrupt urban elites and protested for a more decentralized agrarian financial structure.

between Soviet and American negotiators that took place over luncheons and dinners became a principal channel for negotiating many of the most difficult provisions of the SALT I Agreements (Garthoff, 1977). Formal meetings, in Garthoff's opinion, are necessary as "on the record" but not adequate for actual negotiations since the procedure "was rigidly formal, with little time devoted to actual discussion." Interestingly, the informal mechanism was "not much used from 1973 through 1976 in SALT I - a reflection of Washington's view that the delegation should operate under a more limited negotiating mandate." (Garthoff, 1977)

4.5 Summary

Conflict resolution, peacebuilding, and cooperation in general have been found greatly enhanced by the employment of ritual by mediators and negotiators, supporting the solution of complex, deep-rooted conflicts, and transforming worldviews, identities, and relationships.

Food sharing and feasting rituals, despite the admission of the importance of these opportunities for informal exchange and deeper bonding, are often overlooked as a deliberate component of negotiation strategies.

5. Applied gastronomy in stalemate negotiations: The Case of the Ukraine-Russia Conflict.

In many of the "breakthrough" moments in negotiation between American Secretaries of State and the President of the Russian Federation, Vladimir Putin, happened during informal settings such as over lunch, tea, or on his yacht on the Black Sea. During a private dinner, Hilary Clinton managed to get some invaluable insights into his character, which illustrates the importance of the setting for understanding the needs and perspective of the person you negotiate with.

Rex Tillerson understood over drinks on the same yacht that Putin feels lack of recognition and respect for the role of the Russian Federation in the global order, saying "the problem with you Americans is you think that you won the Cold War, and you treat us like a banana republic, but we're still a nuclear power – we could have fought that war. But we didn't." If you don't give him and Russia acknowledgement and respect, he will start taking actions to prove that Russia matters, which is what we are seeing now "(Script from Harvard Law School).

Examples of this from the more recent historical record include a dinner hosted in 2017 by UN Chief Antonio Guterres attended by Greek Cypriot leader Nicos Anastasiades and his

Turkish Cypriot counterpart, Mustafa Akinci, that marked the initiation of peace talks between Turkish and Greek Cypriots[13].

In the midst of the protracted Ukraine-Russia conflict, finding creative and unconventional ways to foster trust and open channels of communication becomes imperative. One such approach involves the age-old practice of sharing meals and breaking bread together. Communal gatherings and feasts have historically played a role in diplomacy and conflict resolution, providing a non-confrontational and informal setting for key actors to build trust, engage in dialogue, and establish personal connections.

As we have discussed in preceding sections, across history, communal meals have served as a backdrop for diplomacy and peacemaking. The act of sharing food is deeply rooted in human culture, transcending boundaries, and establishing common ground. The psychological impact of shared meals, where individuals come together to eat and converse, can't be underestimated. It breaks down barriers, humanizes the participants, and fosters connections.

Feasting is not just about the food; it's about the symbolism of sharing a table. In the context of the Ukraine-Russia conflict, such gatherings can serve as a powerful trust-building tool. By sitting down together to enjoy traditional dishes from both Ukrainian and Russian cuisines, the parties involved symbolize their respect for each other's cultures, traditions, and histories.

To maximize the potential of such a gathering, several parameters need to be considered:

Location: Choosing a neutral "third" location, such as a serene coastal resort or peaceful countryside setting, can create an atmosphere of positivity and remove the parties from the immediate conflict zone. Accessibility for all participants is crucial.

Timing: Scheduling the gathering at a time when all key actors can participate ensures maximum engagement.

Neutrality and Inclusivity: The menu should be designed to respect the diverse cultural backgrounds and dietary preferences of all parties involved. Inviting in particular representatives from the Ukrainian government, Russian government, and select international actors.

Mediation and Facilitation: Neutral mediators or facilitators should guide conversations and maintain a focus on peacebuilding. Adhering to a pre-defined agenda is important to address substantive issues.

The Feasting Gathering. Imagine a sunny, peaceful location where delegates from all sides of the conflict come together. They arrive in a relaxed atmosphere, engage in introductions,

[13] (https://www.aljazeera.com/news/2019/11/25/cypriot-leaders-in-berlin-after-un-push-to-revive-peace-talks; https://ahvalnews.com/cyprus/cypriot-leaders-say-berlin-meeting-was-positive-step)

and share a meal filled with traditional dishes, carefully chosen to represent the best of Ukrainian and Russian cuisines. Cultural performances or displays further showcase the region's richness, creating an atmosphere of mutual appreciation and understanding.

Such a “Communal gathering” can provide a unique opportunity for key actors to get to know each other beyond their official roles, creating a human connection. They build trust and confidence among participants and offer the potential for joint statements or agreements that demonstrate goodwill.

Positive public opinion can result from such gatherings. Leaders can use this support to strengthen their commitment to the peace process. This boost in public backing can provide momentum and political leverage for the formal negotiation process.

In a conflict as deep-rooted and complex as the Ukraine-Russia standoff, unconventional approaches can offer a glimmer of hope. Communal gatherings, rooted in the simplicity of breaking bread together, can serve as a powerful tool to bridge divides, build trust, and lay the foundation for more structured formal negotiations. While not a panacea, it adds a unique dimension to peacebuilding efforts and emphasizes the importance of ongoing dialogue, commitment, and international support in achieving a lasting resolution.

All parties involved should seriously consider the benefits of breaking bread together as a stepping stone toward peace. By leveraging the emotional impact of shared meals, they can create a path towards reconciliation, understanding, and, ultimately, a peaceful resolution to the Ukraine-Russia conflict.

In conclusion, while communal meals and feasting can be a valuable tool for building trust and rapport among key actors in a conflict, they should be part of a larger, comprehensive negotiation process. They can help create a conducive atmosphere for dialogue and understanding, but the resolution of the Ukraine-Russia conflict will ultimately require sustained, structured, and formal negotiations addressing the root causes of the conflict.

6. Final Remarks and Future Research

In 1665, Samuel Pepys famously wrote: “*Strange to see how a good dinner and feasting reconciles everybody*”. This quote goes to the very heart of our main argument – that breaking bread together improves the chances of resolving conflicts.

In this interdisciplinary paper, we have presented a multi-faceted mechanism that runs from a hormonally and psychologically emboldened feeling of trust prompted by sharing food to reaching an agreement. We have discussed the historical origins of feasting and how our ancestors celebrated with rituals and procedures to mark peace and collaboration. We have discussed the notion that trust improves the chances of reaching agreement in negotiations, a widely acknowledged insight in the social sciences. Combining these building blocks, from disparate disciplines, to form a single argument, has not, to our knowledge, been considered systematically until now.

We have drawn from several different disciplines to develop our hypothesis and argument, and we have provided some historical anecdotal evidence supporting the hypothesis and argument. It would be good in future research to carry out further empirical and experimental research to test the robustness, and the boundaries, of our hypothesis and argument.

We did not develop a theoretical (or analytical) model to illustrate the mechanisms in a formal way that we postulate are at play here. We wanted to instead drill down to the mechanisms that underlie our main argument. Future research ought to develop a formal framework to further analyse the proposed mechanisms.

We are cognisant of the fact that the ability to gather peace negotiators around a table depends on some pre-existing level of trust felt by each of the parties. It would also be reasonable to argue that a neutral third party and location are prerequisites for successful peace negotiations. We did not explicitly consider these points as part of the theoretical arguments, because we have wanted to discuss the utmost barebones of our logic. As can be seen, however, in the application presented in Section 5, these aspects can be easily incorporated into the analysis.

The present article does not attempt to quantify the relative importance of each specific mechanism in generating trust. For example, how important is the role played by hormones? Is it more significant than that of the psychological factors? From our reading of the existing work in each of the areas that we touch upon, it would seem plausible that all the various factors interact and have historically co-evolved to provide ways to build or display trust. In future research, it would be good to assess whether there is a factor that is more important and powerful than another one; to ultimately be able to recommend which areas would best be supported, e.g., via policy making.

Trust is difficult to build and easily destroyed. Another important consideration is how an agreement could be maintained. That is, what are the conditions necessary for both parties to keep the agreement and avoid breaking the rules as stated in the contract? History is full of broken ceasefires and countries that are in long-term conflicts due to failed attempts to keep or indeed restore peace. In future research, it will be essential to understand whether and how food can contribute to the longevity of peace agreements.

Food is far more than sustenance—it is a universal language of trust, a symbol of shared humanity, and a powerful tool for bridging divides in negotiation and conflict resolution. From ancient feasts that forged alliances to the informal meals that shaped modern diplomacy, the act of breaking bread transcends cultural, political, and ideological barriers.

This paper has illuminated how gastronomy, by leveraging deeply rooted biological, psychological, and social mechanisms, creates opportunities for connection where mistrust prevails. In an age where formal institutions often falter, and divisions grow deeper, shared meals offer an overlooked yet enduring avenue for fostering dialogue and cooperation.

If we can integrate the wisdom of our evolutionary past with the strategic imperatives of our present, we may find that the most profound solutions to our most intractable conflicts begin not at the negotiating table, but over the shared act of breaking bread.

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