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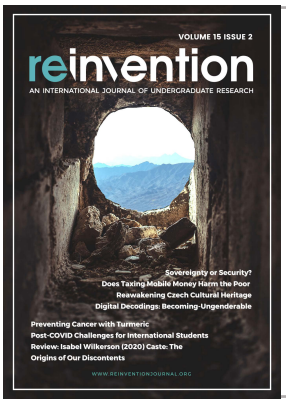

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Editorial

Reinvention: Research Through a Cultural Lens

Shreya Sridharan, University of Warwick

Welcome to this year's final issue of *Reinvention: An International Journal of Undergraduate Research*, Volume 15, Issue 2 (15.2). To close off this year's publications, we present to you a selection of articles spanning across history, economics, the arts and biology. This issue explores the potential of research to, simultaneously, be set within a deep and nuanced cultural context *and* transcend cultural boundaries at the same time, generating knowledge that is both local and universal.

In this edition, we bring you five original research papers, a guest article and a book review of Isabel Wilkerson's *Caste.*

Kalos Lau's 'Sovereignty or Security? Maintaining Peace and The Ambivalent Relationship Between Europe and Washington, 1945–1991' explores the relationship between sovereignty and diplomatic protection for Western European states during the Cold War. Comparing policies adopted by the USA and Western European countries, Lau focuses on understanding the scale and nature of these dichotomous policies and finds that despite strategic alliances with Washington, European states were able to retain sovereignty and pursue independent foreign policies. This paper provides an interesting discussion of hegemonies and the extent of their power, especially at times of conflict, and deftly balances perspectives from varying historiographical schools, thus providing an adept display of research within cultural and sociopolitical contexts.

In 'Does Taxing Mobile Money Harm the Poor: Evidence From the 10 Per Cent Excise Fee Introduction in Kenya', Kai Foerster examines the effect of transaction costs on the use of mobile money in Africa. While emphasising the value of mobile money as an innovation, Foerster finds that poorer households have reduced their monthly mobile-money transactions by 25 per cent more than richer households as a result of the excise fee. This result is presented alongside evidence that reduced remittances (due to fewer transactions) were not substituted with other transactions, suggesting a potential decline in remittance flows for poorer and more vulnerable households. Foerster provides incisive insights into the potential impacts of such taxation on the very aim of a tool such as mobile money – to serve as a social protection mechanism, while also considering that these results lie within a very specific cultural context. As with many practical solutions to problems in development, scalability is a key concern and must be examined on balance with cultural and geography-specific needs.

'*Valerie and Her Week of Wonders*: Reawakening Czech Cultural Heritage through the Psychoanalysis of New Wave Surrealism' by Toby Phipps is an expertly written analysis of *Valerie and Her Week of Wonders*, a cornerstone of Czech New Wave cinema, placing the film within a context of Freudian psychoanalysis. The film, based on a 1935 novel, narrates the story of a 13-year-old girl at the onset of menstruation and her sexual awakening, blending the genres of fantasy and Gothic horror. Phipps roots their analysis of the film with three key concepts of psychoanalysis – the id, ego and superego and skilfully explores the connections between Freud's theories and the surrealism of Czech New Wave. This paper makes for an engaging read, guiding the reader towards a niche cultural context and arguing that viewing art through a Freudian lens

opens doors for social transformation and enables communities to revisit and be reinvigorated by their cultural heritage.

Emerson Hurley's 'Digital Decodings: Becoming-Ungenderable in Online Spaces' discusses the role and functioning of gender identities within digital spaces. Hurley puts forth compelling ideas about the way we develop our gendered identities online and posits two potential pathways for what this might mean: one, that we may be able to resist gendered societal expectations; or two, that the gender binary may be further reinforced by digital media. Hurley brings a poignant conclusion: that it is neither one nor the other, but rather that the Internet presents a site of constant tension between the two forces. This paper's strength lies in how it situates a modern, extremely relevant issue in a strong theoretical background and relays the proposed ideas within a context of an almost universal digital culture while opening the door towards nuanced, complex and distinct cultural frames of thought on this topic.

In 'Preventing Cancer With Turmeric: The Whole is Better Than the Sum of its Parts', Megan Bowers reviews the use of turmeric for cancer prevention, setting it within the context of existing research surrounding its phytochemical, curcumin and its medicinal capabilities. Bowers discusses the bioavailability and preventative activities of turmeric compared to curcumin alone, and highlights the need for study on the chemopreventative potential of phytochemicals as opposed to a more enhancive role in cancer treatment. This paper shows the value and need for alternative therapeutics within the area of cancer treatment and prevention, for which the answers may lie in looking back to cultural and indigenous healthcare practices and remedies.

Aliya Pal presents a thoughtful piece on post-COVID challenges for international students in this issue's featured guest article. Pal argues that the main issues faced by international students were acculturative stress and economic stress due to job uncertainty, where the former refers to a reduced health status for individuals undergoing assimilation to a new culture. Using a literature review of government reports and news articles, Pal identifies potential solutions to improve the experience of international students, such as a dedicated careers team or a student support programme for students of similar backgrounds. This article is a clear reflection of our focus for this issue: to showcase sensitive, compelling research that considers and centres research within culture.

In Sanika Savdekar's review of *Caste: The Origins of Our Discontents* by Isabel Wilkerson, this theme is discussed in more detail. The book itself is an exploration of different caste systems in the world, linking the histories of India, Germany and the USA, and Savdekar provides a contemplative review of Wilkerson's skill and style as well as on the topic itself. As Savdekar aptly puts it, the book, perhaps intentionally, succeeds in making the reader uncomfortable and encourages them to reconsider and challenge their own views about cultures, hierarchies and stratification.

The articles in this issue span a wide range of topics, and the underlying threads tying them together may seem less obvious, but I believe that bringing them together through this issue offers a unique perspective on the nature of the connections between different disciplines and topics. What is it that is common about turmeric for cancer prevention and peace-keeping struggles? Or Czech cinema and mobile money in Kenya? My answer is that each paper brings forth a different iteration of the same two core ideas: one, that an issue or problem can be viewed both specifically within a cultural context as well as universally, hence needing solutions that address both perspectives; and two, that respect and inclusion of various cultural viewpoints can enrich the research that we conduct.

To refer back to the papers we are presenting, turmeric as a health remedy has widely been used in indigenous and ethnic communities and viewing this as a viable solution can bring forth cutting-edge research and solutions as widely applicable as for cancer prevention. Similarly, understanding the purpose that mobile money serves for communities in Kenya specifically as opposed to anywhere else in the world can enable a better understanding of how this service can be improved or provided more efficiently. Thus, I urge our readers to keep this in mind as they peruse these papers: culture is both unique and all-encompassing, and finding the balance and interplay between the local and global can help us achieve, or at least strive towards, more innovative and inclusive solutions for our problems.

With this issue, my tenure as Editor at *Reinvention* has come to an end. I am excited to introduce Elle Pearson as the next Editor. As a strong part of our team, she has consistently helped innovate our work and I have no doubts that she will take the journal to new heights. I am honoured to have had this role at *Reinvention*, and I have greatly enjoyed my time here. Having the chance to work on our Special Issue earlier this year was extremely rewarding, and I am thankful for the opportunities this role has given me. I am ever-appreciative and proud of the work we do at *Reinvention,* and I would like to thank Mara Caldarini for her guidance and support, and the amazing editorial team that I have had the pleasure of working with. To all our readers and authors, I hope you will have an equally fulfilling journey with *Reinvention*, now and in the future.

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Sovereignty or Security? Maintaining Peace and The Ambivalent Relationship Between Europe and Washington, 1945–1991

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Abstract

Among historians, there has been a recurring debate on whether European states lost their de facto sovereignty during the Cold War (1945–1991). While Orthodox Cold War historians claimed that the Europeans were nothing more than chess pieces of the two opposing superpowers, others argued that the continental nations retained autonomy and contributed significantly to the war effort. In response to the academic discussion, this article aims to clarify whether Western European states traded their sovereignty for nuclear and diplomatic protection from the USA. By comparing the policies adopted by Washington and the Europeans – namely the British and French, respectively – I attempt to elucidate the scale of their disagreements and provide a clear analysis of the issue at hand. Upon research, the related literature and first-hand historical sources have demonstrated that: (1) Britain and France played an essential role in initiating the Cold War; (2) Western European states carried out foreign policies that were not in line with Kissinger's direction during the 1960s and 1970s; (3) Transatlantic diplomatic differences remained in certain policy directions during the 1980s and early 1990s. In general, despite being close strategic allies of Washington, the European states retained their decision-making power.

Keywords: The Orthodox School of the Cold War, European Integration, Post-War Europe, European sovereignty in the Cold War, France's role in the Cold War, Cold War Historiography, The Anglo-American Special Relationship

Introduction

Between 1945 and 1991, peace in Europe was maintained through intimidation, diplomacy and deterrence between the Communist bloc and the West. For many Orthodox Cold War historians, this system of 'long peace' was a product of international bipolarity (Hopkins, 2007: 914–20). Nonetheless, according to Michael Cox (2007: 128–29), by understanding world politics only through the perspective of the two superpowers, the Orthodox School essentially implied that European states had become pawns of the superpowers and that they outsourced their defence to the USA or the USSR. In this article, I will argue that although Western Europeans had made some concessions to Washington, they did not trade their sovereignty in exchange for nuclear and diplomatic protection. Instead, in many cases, they took the initiative in maintaining peace. Following Cox's post-revisionist view, which emphasised that complex factors resulted in the development of the Cold War and that the two superpowers were overstated in historical studies, I will provide empirical studies specifically on the reaction of Britain and France when they came into conflict with US interests. The example and cases analysed could then provide further empirical evidence supporting the academic critique of the Orthodox narrative.

To narrow down the scope of analysis, this article will mainly focus on the policies of the USA and two major European states – namely Britain and France. For less militarily and financially robust European countries

such as Italy, Spain and Belgium, the sovereignty–security dynamic was different. However, as this article aims to focus on specific case studies, the conditions of the less political relevant European countries could not be covered as detailed, which is one of the limitations of this research.

In terms of key concepts, Krasner's description of 'Westphalian sovereignty' – that is, 'the exclusion of external actors from domestic authority configurations' – will be used in this article to interpret the modern notion of 'sovereignty' (Krasner, 2001: 6–7). Based on this definition, the loss of sovereignty, then, was when foreign actors intervened in the domestic policy of a sovereign state and affected that state's political, economic or social policy directions. For instance, in the 1970s and 1980s, the International Monetary Fund (IMF) provided loans to Latin American countries under the condition that they implement the neoliberalist 'stabilisation programmes' designed by IMF economists (Pastor, 1987: 249). If the Latin American countries had no way but to accept foreign intervention policy-wise to acquire the funding, this would be a breach of sovereignty as their domestic policies were changed as a result of a direct request of external actors. When put into the context of the Cold War and US–European relations, if the USA – which had been providing substantial financial and military support to Europe – undertook direct action to force the European countries to comply to their Cold War policy, and if the European countries had no way but to obey owing to Washington's power over their internal security and economy, the sovereignty of those European countries would have been breached.

As regards other important concepts discussed in this article, the term 'peace' will be understood as the absence of hot or nuclear war on the European continent through military deterrence or diplomatic efforts. This definition was made to put the concept into historical context of the European experience in a time of ideological conflict.

This article will begin with a brief introduction to the bipolar narrative laid out by the Orthodox School of Cold War Studies. After having established their argument, the article will proceed to re-examine specific viewpoints regarding the role of European countries that I believe the Orthodox School have downplayed. In Section 2, I will provide an analysis of Britain's and France's roles during the start of the Cold War, while Section 3 focuses on the Western European states' increasing independence from Washington as the conflict progressed. Finally, the last section will demonstrate how the European states further stray away from US policy direction towards the end of the Cold War. In summary, by confirming that the Europeans could generally pursue their national interest and carry out distinct peacekeeping efforts regardless of external pressure, it could be evinced that they had not to trade sovereignty for peace.

The superpower narrative of the Orthodox School

The Orthodox School was initially developed by US historians – many of whom were serving in US Government Agencies – during the early stages of the Cold War. For instance, Herbert Feis, a renowned historian who had contributed greatly to the development of the Orthodox School, was part of the Hoover and Roosevelt administrations and served as an economist (Benson, 1981: 15–16). Due to the Orthodox historian's direct involvement in the bureaucracy, the analysis provided by these historians was primarily based on diaries, memoirs and publications of diplomats and politicians, as well as the historian's own political understanding (Hopkins, 2007: 913–34; White, 2000: 35–36).

The use of insider experiences and deep political involvement of the Orthodox historians resulted in a rather realistic way of thinking. Hopkins (2007: 915) observed that the Orthodox historians adopted a 'view of international affairs' in which they considered the Cold War dynamic was run by 'rational decision-makers

acting on national interests'. The Orthodox historians considered Stalin's aggressive personality and the anti-democratic nature of the USSR as the fundamental reason for the outbreak of the Cold War, and they believed that the USA had no choice but to respond strongly in defence of 'universalism' and democracy (Crapol, 1987: 251–52; Hopkins, 2007: 915–16; White, 2000: 35–37). Hence, it could be said that in the Orthodox School's perspective, the USA was the defensive and 'innocent' side, and that the entire Cold War was simply a power struggle between the two superpowers.

If we directly examine the works of Arthur Schlesinger Jr – another figurehead of the Orthodox School – we can understand the claims above more clearly. In his article, 'Origins of the Cold War', Schlesinger (1967: 22–52) contended that the 'Cold War in its original form was a presumably mortal antagonism [...] between two rigidly hostile blocs, one led by the Soviet Union, the other by the United States' (Schlesinger: 22–52). Here, it was evident that Schlesinger used a paradigm of a bipolar world order to characterise the Cold War, even though he did not explicitly use the term. He considered the Cold War as a conflict between two camps, with two superpowers taking the lead, and of course, the superpowers being the spotlight of historical analysis.

Nevertheless, this view had been vigorously criticised as a 'scholarly rationalization for official policies' (Maddox, 2015: 5). William Appleman Williams (1972: 207), for instance, deemed history as 'a way of learning', although 'acknowledg[ing] [...] the facts as they exist without tampering with them', a principle that he argued that the Orthodox School had failed to adhere to. Williams believed that by emphasising the role and moral grounds of the USA in the Cold War, the Orthodox School was using history to serve political purposes. Moreover, Cox (2007: 128–29) argued that the Orthodox School did not simply justify US foreign intervention, but it also downplayed the role of European countries in the Cold War.

This article will follow on the lines of criticism against the Orthodox perspective – especially the way they portrayed a weak European initiative during the Cold War – and attempt to search for a more precise picture to describe the role of the European countries during the second half of the twentieth century.

Britain and France in the early post-war period

In general, the Orthodox School did not provide a detailed examination of the role of European states during the start of the Cold War. For example, when investigating the origins of the conflict, Schlesinger (1967: 23–24) focused on the role of Russian expansionism, which challenged the post-World War II status quo and the 'essential response' against 'communist aggression' from the USA. Even when he was rebutting the revisionist view, he still focused on discussing whether the USA or the USSR instigated the conflict without considering the role of the European countries (Schlesinger, 1967: 24–25). Schlesinger's conceptualisation of the Cold War demonstrated that he, or more broadly, the traditional Orthodox School, had not paid attention to the role of the European countries. Not because they were reluctant to study it, but simply because they deemed it too insignificant a cause of the East–West conflict.

Nevertheless, in the 1940s and 1950s, Britain and France followed their distinct policies to pursue their national interests, which occasionally contradicted the interest of Washington. Britain, according to Deighton (2010: 113, 123), was deeply involved in warning the West about the perils of Communism and establishing an anti-Communist coalition. As early as the 1940s, the British government had already understood that Soviet expansion would threaten European peace (Deighton, 2010: 113–16). They made deterring Communist influence the centre of their foreign policy and 'generated a mindset about Soviet intentions that was to dominate thinking for the next fifty years' (Deighton, 2010: 113, 114–16, 119). British

military documents disclosed that Churchill had drafted a war plan, Operation Unthinkable, which aimed to attack the USSR right after World War II had ended. In the official report, the British Joint Planning Staff considered the objective of the Operation as 'impos[ing] upon Russia the will of the United States and British Empire' (National Archives, 1945). In the document, both the possibilities of engaging in a total war and limited conflicts were considered, with the total 'elimination of Russia' as the most extreme outcome (National Archives, 1945). It was clear that on a strategic level, Britain had actively considered 'contain[ing] the power of the Soviet Union' even before Washington had put forward its Marshall Plan (Deighton, 2010: 117). Moreover, Barnes (1981: 400–01) demonstrated that the British Secret Intelligence Service (MI6) had aided the newly founded CIA to establish espionage mechanisms and provided them with intelligence about Russia, as the British Empire had prior experience in dealing with Russian intelligence. Based on this information, it could be argued that in the early post-war period, Britain was a partner, not a dependency, of the United States, and it contributed greatly to the creation of institutions and procedures that would play critical roles in decades to come.

Although France was not as assertive as Britain, Paris still played a role in countering Communist expansion and maintaining European security. Initially, wary of German revanchism and troubled with her own domestic recovery, Paris remained neutral in the US–Soviet conflict from 1944 to 1947 (Hitchcock, 1998: 3–4). However, as France became aware of the 'deepening of the East-West rift' and felt threatened by the growing Communist forces at home, it started to devote more effort to countering Communist infiltration (Soutou, 2001: 36–37). Since the early post-war period, Communists had been appointed within the government to hold important posts, most notably with Charles Tillon fixed as Air Minister (Villatoux, 2010: 165–72). The Communist forces only grew stronger in France during early 1947, with Communist François Billoux becoming the Minister of Defence and the continuous infiltration of Communist forces in the French Home Army (Serfaty, 1975: 133; Villatoux, 2010: 165–72). Nevertheless, the gap between the Communist Party line and the French national policy gradually widened, as the Communists did not support military actions against Indochina and the nationalist sentiment of the expansionists (Serfaty, 1975: 135–36). Along with the series of strikes inspired by Communism in November and December 1947, the tolerance of the French Government came to an end (Soutou, 2001: 36). Communists were removed from the French government, and Paris agreed to the formation of a Federal Republic of Germany (FRG) to counter Soviet influence from the East (Soutou, 2001: 37). However, despite the decision to counter Communist infiltration with the help of Washington, France still maintained a high level of independence when dealing with foreign affairs.

As illustrated by Hitchcock (1998: 171, 195), in 1952, Paris declined the US proposal for a European Defence Community, which demanded European countries cede their independent military commandership to a united force. Although this rejection led to a 'ferocious outburst of spleen in Washington', Paris maintained its judgement to protect its sovereignty (Hitchcock, 1998: 196). Here, it is evident that France was pressured not by Washington to contain Communist expansion, but by the changing international circumstances. How France had chosen to first ignore and then participate demonstrated that the Anglo-Saxon states were not able to influence her decisions. France was extremely reluctant to give up on her sovereignty. The French distrust towards the USA was further extended in the 1950s when France sought a 'tacit reinsurance' in the USSR and increased commercial contacts with Moscow (Soutou, 2001: 44). Therefore, it was evident that France tried to construct a 'double security' mechanism and maintain peace in Europe through acting as a relatively independent mediator (Soutou, 2001: 38–40).

Nonetheless, despite the fact that many US and Orthodox historians had recognised that the British had taken the initiative in starting the Cold War and that the French had enacted certain anti-US policies, they continued to argue that, in general, Europeans still depended on US assistance for maintaining peace (Sheehan, 2009: 147–55). For instance, Leffler (2010: 83–84) contended that the Soviet atomic testing in August 1949 made the USA and Western Europe realise that 'an adequate military shield' was necessary to protect both regions – this, unfortunately, was something that only the USA could provide. Holloway (2010: 282–84) followed this argument and suggested that Europe was left with little choice but to cooperate with the USA so that they could make use of the US nuclear arsenal to prevent possible European wars. However, when simply viewing the Cold War as a Great Power contest, the Orthodox School might risk overgeneralising the situation. While the USA did own a gigantic atomic arsenal and provided a nuclear umbrella for Western Europe, the European countries still maintained the decision whether to join the US effort or not. According to Deighton (2010: 121), even though US support was 'essential' to 'British's international diplomacy', 'tensions between the UK and the United States' could still be spotted from 1947 onwards, with disputes ranging from the German question to nuclear concerns. London eventually carried out its own nuclear testing in 1952 as negotiations with Washington on nuclear cooperation failed, while France followed suit in 1956 since it distrusted the US guarantee on European security (Deighton, 2010: 121; Soutou, 2001: 38–39). Overall, in the Orthodox tradition, little emphasis was given to the agency or differing experiences of other powers. Orthodox historians, such as Schlesinger and Feis, sometimes overlook or play down the European role, which simplified the power dynamics during the Cold War.

Détente, reconciliation and European autonomy

The Orthodox School's coverage of the détente period was not as strong as its study of the Cold War's origins. Feis, as part of the US administration during the early post-war period, had in-depth knowledge regarding the events of the Second World War. His 2015 book, *Churchill-Roosevelt-Stalin: The War They Waged and the Peace They sought*, as well as his 1970 study of the Cold War origins, *From Trust to Terror*, all concentrate on studying the events within the period of the 1930s to 1940s (Feis, 2015; 1970). Although the later scholars adhering to the Orthodox School of thought had more access to archives and experienced further academic development on the topic, neo-Orthodox historians such as Gaddis still remained focused on the role of the United States. For instance, Painter (2006: 528) criticised Gaddis's *The Cold War* (2007) for its 'disproportionate focus on the early Cold War (1945–62)' and its failure to 'examine how social, economic, and political conditions in Europe and Asia' led to and affected the course of the Cold War. With reference to the critiques above, the Orthodox School's overemphasis on the early stages of the Cold War and the US viewpoint might limit the scope of their analysis. To provide a wider picture, I will be focusing on the European perspective during the mid-Cold War (1960s–1970s) in the following section, exploring how they worked alongside the USA while pursuing their own national interests.

The growing divergence between European and US policies could be further observed in the 1960s and 1970s when the Western European countries' diplomatic approaches went further apart from the US ones. Britain in particular – despite having a 'special relationship' with the USA – made decisions that were incompatible with US strategies from time to time (Hughes and Robb, 2013: 875–76, 887–88). As certain Orthodox historians had pointed out, Britain's status as a world power was gradually fading during the period. For instance, Reynolds (1985–1986: 13–14) claimed that 'Britain's residual capability as a great power was eroded' and became dependent on Washington for military support since Britain's military power was surpassed by the FRG and excluded from European integration. By depicting Britain's 'imperial collapse' in the 1960s, Reynolds did accurately showcase London's difficulties (Strang, 1994: 278).

Nevertheless, although Britain's military and economic strength had been weakened, it was still relatively independent in terms of foreign policy. Despite relying on US support, Britain practised a defence-cut policy that was vehemently opposed by Washington (Hughes and Robb, 2013: 877–78). Wilson's abandonment of Singapore and the Persian Gulf, Heath's military retreat in Suez East in 1970 and Healey's £50 million cut in defence demonstrated that the British government was gradually cutting down its foreign military commitment and ceding out the imperial territory (Sato, 2009: 99–100; Tan, 1997: 303–04). Washington was dissatisfied with the British decision to dissolve the Empire as that would mean that 'the "ramparts" of the Free World would have to be defended solely by the United States' (Hughes and Robb, 2013: 871). One of the direct impacts of the British military withdrawal was their choice to not continue their involvement in the Vietnam War. While Harold Wilson, the Labour Prime Minister at the time, wished to maintain good relations with the States, he refused the offer from the USA for the British to stay in the conflict in exchange for US support for pounds sterling (Vickers, 2008). Moreover, as McAllister and Schulte (2006: 22–43) pointed out, the arrangement of withdrawal was done without 'counsel[ling] either the Eisenhower or Kennedy administrations' as the British did not believe that there could be a way that they could continue their departure with the Anglo-American 'special relationship' undamaged. This lack of communication concerning the Vietnam affairs could explain the high level of discontentment from the USA. Hughes and Robb (2013: 876) stated that Washington was so dissatisfied with Britain's uncooperating attitude that it had considered 'withdrawing its troops from NATO'. In general, London's intent to shift to a more demilitarised outlook was clearly against the US strategic aim in combating Communism. However, its capability to defy US policies exactly demonstrated that it remained autonomous and had decided to avoid excessive involvement in colonial management and Great Power conflicts.

Nonetheless, as London's influence in both the developing world and Europe declined, its role as the leading European state was gradually being replaced. Unlike the British, who had a long-term collaborative relationship with Washington, France, under de Gaulle, insisted on building a 'European Europe' outside US control (Ellison, 2006: 853–55; Larres, 2000: 214). During the 1960s, Washington's gradual withdrawal from supporting European defence against Soviet nuclear attacks reinforced de Gaulle's distrust of the USA (Hoffmann, 1964: 6–7). This could be demonstrated by de Gaulle's attempt to expand the Fourth Republic's nuclear programme and his resistance to the US proposal for a 'supra-national' Europe (Hoffmann, 1964: 8–10; Segers, 2012: 348, 351–52, 357, 361; Soutou, 2001: 47). Nevertheless, although de Gaulle rejected the US proposal for a United States of Europe, he supported creating a European Political Union under French guidance (Segers, 2012: 348–49). Therefore, what de Gaulle despised was not European unification, but any involvement of external forces that might threaten European sovereignty. As de Gaulle became increasingly irritated by US interference, Paris gradually shifted away from the Atlantic alliance and approached the Cold War differently. Larres (2000: 215–16) contended that de Gaulle's decision to withdraw France's military forces from NATO's integrated military command structure in 1966 was part of his *Ostpolitik à la française*, which aimed to build a 'less bipolar world' and promote European peace in the long term.

At first, de Gaulle attempted to initiate a détente dialogue with the USSR, but the plan was not able to come to fruition because of the Communist crackdown on the 1968 Prague Spring (Rynning, 2017: 267–89). However, as the tension decreased, France, along with Germany, advocated cooperation between the European Community Common Market and the Soviet COMECON (the Council for Mutual Economic Assistance). The results came in the form of the Soviet's de facto recognition of the European Community (EC) Commission and the EC's acknowledgement of the 'COMECON's approach through the [EC] Commission' (Yamamoto, 2007: 87). Obviously, the French President did not see US leadership and European

subordinate as a necessity for maintaining peace. Instead, he viewed East–West reconciliation as a way to reunite Europe and forge a long-lasting peace.

In general, France began to reconcile with the East from the 1960s onwards and used détente to promote peace. De Gaulle was not as devoted as Kissinger to the ideas of *realpolitik*, nor did he believe that deterrence was the only way to maintain peace (Humphreys, 2014: 3151–52). The British, similarly, withdrew its military forces and provided less support to the US containment policy. The differences between US, UK and French diplomatic approaches made it impractical for European states to sacrifice their sovereignty and follow US strategy, and the transatlantic differences continued during the 1980s and 1990s.

The end of the Cold War and European integration

As Michael Cox (2007: 112–13) and Campbell (2008: 103) put it, a 'Transatlantic Split' existed in Cold War historiography regarding events from 1975 onwards. While European and constructivist studies started to focus more on how European states exercised their sovereignty, the traditional US story continued to describe Europeans as actors that 'play[ed] a supporting role' in the grand finale directed by Reagan and Bush (Campbell, 2008: 104). Cox (2007: 128) even used the term 'Bound to Lead' to describe how superior the USA was in the 'American "grand narrative"'. To understand how US scholars amplified the role of the USA in the final hours of the Cold War, we could take a look at John Gaddis's *The Cold War: A New History* (2007). When he discussed the 'critical 1989–91 period' in his book, the French and German experiences were nearly omitted (Bozo, 2007: 455). He portrayed the policies of Reagan and Gorbachev, the leaders of the superpowers, as critical reasons that contributed to the collapse of the Eastern bloc (Gaddis, 2007: 304–21). While Reagan's disarm negotiations and Gorbachev's *perestroika* were indeed important factors, it seemed a little baffling that the European's efforts were generally not mentioned (Matlock, 2008: 57–78). While Gaddis did not openly describe Europe as dependencies of the US, his writings nonetheless implied this assumption. Nevertheless, numerous historians and evidence had demonstrated that the EEC, with France, FRG and Britain as its leader, had undertaken independent actions to promote greater peace and cooperation in Europe.

The signing of the Helsinki Final Act in 1975, which functioned as a basis for East–West Europe cooperation, was used by numerous researchers to describe how the Western European states, with France and the FRG taking the lead, gradually took the matter of ending the Cold War into their own hands (Davy, 2009: 1–22; Romano, 2014: 153–73; Suri, 2008: 527–45; Thomas, 2018: 27–54). As demonstrated by Suri (2008: 531–32), the Europeans increasingly ignored Kissinger's 'great power lines' since the 1970s and attempted to break US leadership in managing 'West European problems'. Two factors contributed to this firmness in pursuing Europe's own interest. Firstly, as demonstrated above, détente and the *Ostpolitik* of France, as well as that of the FRG, paved a more relaxed environment for European cooperation, which provided Europe with more autonomy and decreased US influence (Romano, 2014: 156–57). What is more crucial, however, is the growing European push for integration. Daniel C. Thomas's *The Helsinki Effect* (2018) provided a terrific account of how the Europeans slowly developed as a third power in times of bipolar conflict. According to Thomas (2018: 40), the EC, with France and West Germany taking the lead, decided to pose 'itself as a legitimate voice in world affairs' by jointly insisting that human rights and democratic principles should be included in the Helsinki Final Act. The Europeans were trying to establish a liberal European norm – one that could function as political '"dynamite" in Eastern Europe' and corrode the Soviet Empire from within (Davy, 2009: 14–15). It should be noted that the EC's united decision had several significant implications. To begin with, it showcased that the Europeans understood how to operate in the bipolar system by exercising

their sovereignty. Moreover, as Davy (2009: 4) and Romano (2014: 156–57) argued, the Europeans revolutionised the foundation for European peace by recognising 'human rights and fundamental freedoms' as the prerequisite for further cooperation (Judge and Langdon, 2018: 258–60). The focus on dialogues, negotiations and maintaining peace meant that the Western Europeans were also less keen to use military measures or harsh policies to confront their Eastern neighbours.

The diverging reaction towards the Poland martial law declaration in 1981 demonstrated strategic difference between the USA and Western Europe. On 13 December 1981, pro-Soviet General Jaruzelski of Poland declared martial law in the nation as an ultimate strong-handed method to crush Solidarity, the 'Eastern bloc's first-ever independent trade union' (Gebert, 1990: 355). As an immediate response to the event, the USA stopped financial support to Poland to demonstrate its disapproval of the Communist crackdown, and then continued with heavy sanctions, such as prohibiting the supply of pipe-laying equipment and advanced technology to the USSR as well as postponing new trade agreements (Woolcock, 1982: 57). However, the Western European countries were not in favour of confrontation. In the British House of Lords debate on 14 December, one day after the declaration of martial law, Conservative Foreign Secretary Peter Carington stated that the UK 'shall observe a policy of strict non-intervention' and 'expect the same of all signatories of the Helsinki Final Act' (Hansard, 1981). France reacted even more strongly in favour of the East. Paris publicly denounced the Reagan administration for its 'double standards', pointing out that the USA had different diplomatic approaches towards military regimes in Central America and that of Poland (MacDonald, 1982: 42–50). Hence, even though the European states generally agreed that they should 'act in accordance with [their] own situation and laws' without outside intervention, their attitudes and policies towards the superpowers varied (Woolcock, 1982).

To understand why the Europeans were much less willing to come into direct conflict with the USSR, it would be reasonable to look at Western Europe's trade patterns. As Stephen Woolcock (1982: 51–52) pointed out, by 1980, 'Western Europe accounted for no less than 80 per cent of total OECD-COMECON trade', with the nine EC countries occupying up to 60 per cent. If we focus on our main cases of study, Britain and France, France had taken a share of 12 per cent in the entire OECD-COMECON trade, while Britain's proportion amounted to around 6.7 per cent (Woolcock, 1982: 52). The close trading relationship and the geographic approximation made it difficult for Europe to impose sanctions against Poland and the USSR. Moreover, the European countries saw the USSR as less of a threat than the USA. The United States, being 'both the ["]leader["] of the Western coalition and as a global power', had to make more careful strategic calculations when coming against another nuclear superpower with a completely different ideology (Williams, 1982: 376–77). This was something that the European countries did not reciprocate, along with the strong US antagonism against the Marxist ideology.

The differences in dealing with the Polish incident as well as the diversified economic policies demonstrated that the European countries could decide on their diplomatic response towards the East, in both times of crisis and regular commercial exchanges. Nevertheless, the decision of both the USA and the European countries to condemn the martial law demonstrated that the two were still more or less on the same page on issues regarding human rights and democracy, and both acknowledged the political differences between the Communist states and the NATO countries.

Conclusion

In general, while the Europeans had been allies of Washington ever since World War II, and the fact that US influence was looming in Europe in the early post-war period, Europeans generally did not trade their sovereignty for peace. Britain and France followed their own agendas, and the Franco-Germany Alliance, along with the EC, also actively reconciled with the East, which provided an alternative to the US doctrine (Gurney, 1985: 110–13). As Deighton (2010: 126) interpreted, despite the Western European states sometimes 'compromise[d]' in consideration of 'the Cold War balance of power', they did not follow the lead of the USA without hesitation. These findings contribute to the existing academic debate in two ways. On the historiographic aspect, this article used the case studies of Britain and France to support the post-revisionist standpoint in which the Cold War was a complex matter with many different factors in play. Empirically, this article highlighted events and cases that had not been largely discussed in the field of Cold War history studies – for instance, Britain's initial participation in the Cold War and the divergent reactions of the transatlantic alliance towards the Polish incident. Future studies could focus on these historical events and further study their implication on American–European relations.

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Glossary

The Council for Mutual Economic Assistance (COMECON): A Soviet-led economic body advocating multilateral cooperation among the Eastern Communist bloc, with the target to counter Western European influence.

Détente: The gradual decrease of geopolitical tension between the USA and the Soviet Union during the late 1960s to 1970s, with arms talks and trade deals between the West and the East taking place.

European Community Common Market: Also known as the European Economic Community (EEC), the organisation was founded in 1958 to facilitate economic integration between European states through developing a common market and customs union.

Helsinki Final Act: The document that was signed at the end of the Conference on Security and Cooperation in Europe (CSCE) on 1 August 1975, with terms promoting the mutual respect of sovereignty and human rights among the participating states.

Historiography: The analysis of different methods and interpretations employed to explain historical events and phenomena, with the aim of understanding how historians approached history writing.

Orthodox School of Cold War Studies: A school of thought that conceptualised the Cold War from a realist perspective, with scholars arguing that the Cold War was just a power struggle between the two superpowers, and that the USA was striving to defend its national interest.

Ostpolitik: A series of policies which had been implemented by West Germany and France since the 1960s to normalise relations with East Germany and the Soviet bloc.

Peace: Defined in this article as the absence of hot or nuclear war on the European continent through military deterrence or diplomatic efforts.

Perestroika: Referring to 'reconstruction' in the Russian language, it was a term used to categorise a series of economic reforms in the USSR during the late 1980s, which attempted to reform the stagnated Communist system by introducing market elements.

Realpolitik: A German notion referring to the pursuit of policy goals based on the examination of practical circumstances, instead of acting purely on moral or ideological tenets.

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Does Taxing Mobile Money Harm the Poor: Evidence From the 10 Per Cent Excise Fee Introduction in Kenya

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Abstract

Mobile money has been a key innovation in Africa that has increased the financial resilience of vulnerable households by providing an easy way to send and receive remittances. While recent literature has focused on the link between mobile money and its function as a social protection mechanism for the vulnerable population, less is known about the extent to which the costs of using the service affect the transaction behaviour of these people. By exploiting a natural experiment in the form of an excise fee that was imposed on mobile-money transactions in Kenya, this paper estimates the differential effect of a price hike in mobile-money transaction fees on transaction behaviour of households with a daily income below 1.25 USD and households above this threshold. The study finds that households with an income below 1.25 USD reduced their monthly mobile-money transactions volume by 25 per cent compared to households above this threshold. Additionally, the paper finds suggestive evidence that the tax also led to a relative reduction in mobile-money remittances received by households below an income of 1.25 USD. The loss in received remittances was not substituted by an increase in remittances sent by cash or in-kind.

Keywords: Mobile money in Kenya, financial resilience in developing countries, social protection mechanisms in developing countries, financial lives of the poor, excise duty on mobile money transactions, Kenyan Financial Diaries 2012/13

Introduction

Mobile money has been a key innovation in Africa in the recent decade; it has been attributed to increased financial resilience of vulnerable households by providing an easy way to send and receive remittances (Jack and Suri, 2014; Riley, 2018). In Kenya, the first mobile-money service was launched in 2007 by Safaricom, a subsidiary of Vodafone (Jack and Suri, 2014). By 2013, 74 per cent of the Kenyan population above the age of 15 had a mobile-money account (Van Hove and Dubus, 2019).

Mobile money has reduced transaction costs, increased the geographical reach of financial transactions and guaranteed a speedy and safe arrival of money to recipients (Aron, 2018). Before the introduction of mobile money, sending money was a difficult and costly endeavour because fewer than 23 per cent of people had a bank account in Kenya in 2009 (Jack and Suri, 2011). For example, cash was sent through a trusted person or in-kind in the form of goods (Zollmann, 2014). In contrast, mobile money has enabled account holders to send each other digital values of money directly by way of text messages without the need for an internet connection. Apart from sending and receiving money, mobile money can be used to deposit and withdraw money at a mobile-money agent or to directly pay for goods (Van Hove and Dubus, 2019). Mobile-money operators fund their expenses by charging one-off fees for sending and withdrawing money. The charge varies between 0.2 per cent and 20 per cent of the transaction value according to the value and type of transaction (Safaricom, n.d.).

Buku and Meredith (2013) and Morawczynski (2009) explain that a key reason for the rapid expansion of mobile-money services in Kenya is the special socio-economic circumstance where a large share of urban workers send remittances back to their rural families who are more vulnerable to climate and weather-related shocks. Mobile money has enabled these vulnerable households to tap into a larger network of relatives and friends when requesting financial assistance to overcome sudden income shocks (Batista and Vicente, 2013; Blumenstock *et al.*, 2016; Jack and Suri, 2014; Riley, 2018). Jack and Suri (2014) estimate that households receiving mobile-money remittances in Kenya were able to offset a drop in consumption resulting from negative income shocks, while households without mobile money suffered a consumption drop of 7 per cent on average. Riley (2018) finds very similar evidence for Tanzania.

By providing an easy and instant way to send and receive remittances, mobile money has been attributed to an increased financial resilience of many poor households in Kenya. To that respect, it has gathered momentum in the literature that attempts to establish a link between innovations such as (un)conditional cash transfers and micro-finance and their ability to function as social protection mechanism (Aron, 2018; Munyegera and Matsumoto, 2016).

A key difference between innovations such as (un)conditional cash transfers and micro-finance and mobile money is that remittances are sent through commercial mobile-money providers that charge transaction fees. Furthermore, the usage of mobile money requires both the sender and receiver to have access to a mobile phone and have the digital literacy to use the service. While recent literature has explored the extent to which digital literacy and access to a mobile phone limits the access of vulnerable populations to mobile money in developing countries, less is known about the extent to which transaction fees affect the transaction behaviour of vulnerable populations (Van Hove and Dubus, 2019; Wyche *et al.*, 2016; Barasa and Lugo, 2015).

The introduction of an excise duty on mobile-money transactions in Kenya provides a natural experiment to study the differential effect that a price increase in transaction fees had on the transaction behaviour of vulnerable populations. On 1 February 2013, Kenya introduced a 10 per cent excise duty on fees charged by mobile-money operators to seek revenues from the rapidly expanding telecommunication sector (Matheson and Petit, 2017; Nord and Harris, 2013; Republic of Kenya, 2013a, 2013b). Safaricom, providing 70.7 per cent of all mobile-money accounts in Kenya, passed through the new duty fully onto customers on 8 February 2013, and they were followed by all other mobile-money operators in Kenya (Communication Authority of Kenya, 2014; Herbling, 2013; Safaricom, 2013).

The full pass-through of excise fees to customers de facto increased the fees customers had to pay to send mobile money over a short time frame. All else equal, economic intuition would suggest that customers might react to the price hike by reducing transactions. Moreover, economic intuition would also suggest that households with a tighter budget constraint might reduce transactions more than less constrained households because the price hike would weigh more into their budget relative to less constrained households.

To investigate whether the excise fee did disproportionately affect the transaction behaviour of more constrained, vulnerable households, this study applies a difference-in-differences estimation strategy to empirically estimate the effect the excise fee introduction had on transaction volumes and values for households with an income below 1.25 USD per person per day, in comparison with households with an income above this threshold. Such an estimation is possible thanks to high-frequency transaction data

provided by FSD Kenya *et al.* (2015a, 2015b), which tracked 298 Kenyan households on a majority of their daily financial transactions between June 2012 and October 2013.

The paper finds that households below a daily income of 1.25 USD per person per day reduced their number of monthly mobile-money transactions by 25 per cent more than households above that threshold. Additionally, the paper finds suggestive evidence that the tax also led to a relative reduction in mobile-money remittances received by households with a daily income below 1.25USD per persons and that the loss of mobile-money remittances was not substituted by an increase in other modes of receiving remittances, such as by cash or in-kind.

Data

Kenyan financial diaries 2012/13

The paper employs panel data of the Kenyan Financial Diaries from Digital Data Divide and Bankable Frontier Associates (FSD Kenya, 2014: 1). The survey tracked 298 households from June 2012 to October 2013 on 483,948 transactions (i.e. a vast majority of daily transactions made by these households). Additionally, the survey recorded socio-demographic characteristics of each household at the beginning of the survey (FSD Kenya, 2014: 1; Zollmann, 2014: 1-3). The fine-grained, high-frequency panel transaction data, including household-level socio-economic characteristics, provides an ideal starting point to investigate how the excise fee affected transaction behaviour of households with different characteristics.

The main drawback of the survey is that only about 1 per cent of the transactions (8334 transactions by 278 households) accounted for mobile-money transactions. Similarly, the survey picked up merely 1369 remittances made by mobile money and received by 183 households, 4332 remittances made by cash and received by 246 households, and 4681 remittances made in-kind and received by 229 households, which can be used for the analysis. It would have been best to analyse only households that were represented in all above categories so that relative comparisons between the categories was fully possible. However, this would have reduced the sample size even further. Given that the difference-in-differences estimator is an unbiased estimator and selection bias into remitting and transacting by mobile money is not the focus of analysis, the paper uses all above observations.

Summary statistics

The above-mentioned observations are aggregated to the volume of monthly mobile-money transactions per household and the volume of monthly remittances received per household, broken down by whether they were received by mobile money, cash or in-kind. Furthermore, observations are also aggregated by the total monthly value of mobile-money transactions per household and the total values for remittances received broken down by mobile money, cash and in-kind transactions. For the main results, the paper focuses on the volume, rather than the total value, of transactions, given that the excise fee was levied on a unit – rather than value – basis. However, results are also discussed on the effect that the excise fee had on total monthly transaction values.

Table 1 illustrates summary statistics for the main dependent and independent variables. On average, households made approximately four mobile-money transactions per month, received approximately 1.7 remittances by mobile money, 3.4 remittances by cash and 4.5 remittances in-kind. These statistics are

broadly in line with literature that suggests that households at the time made approximately four mobile-money transactions per month (Mbiti and Weil, 2011). In terms of total transaction values, households made mobile-money transactions worth approximately 75 USD per month. On average they received remittances via mobile money and cash worth 30–35 USD per month and in-kind remittances worth approximately 25 USD per month. It is noteworthy that all aggregate transaction measures are strongly skewed to the left, which is visible by the fact that the maximum value for each of the above variable is very large compared to the mean.

The key explanatory variable is the indicator variable 'below 1.25USD', which equals one if the income of the household calculated as total median income over a calendar month per adult equivalent (OECD method) per day was below 1.25 USD, and zero otherwise. Out of 298 households, 204 (68 per cent) in the survey made less than 1.25 USD per adult per day.

Variable	Observations	Median	Mean	S.Dev.	Min	Max
Dependent variable (monthly transaction volume per household)						
Mobile money transactions (all)	2081	2	4.00	5.40	1	67
Remittances (mobile money)	810	1	1.69	1.14	1	9
Remittances (cash)	1282	2	3.38	5.50	1	49
Remittances (in-kind)	977	2	4.54	8.13	0	93
Dependent variable (monthly transaction value per household)						
Mobile money transactions (all)	2081	25.88	74.81	220.21	0.12	5062
Remittances (mobile money)	810	18.23	35.04	75.44	1.18	1764
Remittances (cash)	1282	17.64	32.78	56.13	0.12	900
Remittances (in-kind)	977	8	24.94	89.88	0	1992
Independent Variable (coded yes=1)						
Below 1.25USD*	298	1	0.68	0.47	0	1
Controls (Indicator variables coded yes=1)						
Mean household age	298	20.5	22.76	9.80	6.83	67
Household size	298	5	5.25	2.62	1	23
Male household head	298	1	0.54	0.50	0	1
Living urban	298	0	0.31	0.46	0	1

*Income calculated as total median income per adult equivalent (OECD method) per day, over calendar month (in USD)

Table 1: Summary statistics.

Figure 1 below gives a first intuition of how the monthly volume of mobile-money transactions was affected by the excise fee introduced in February 2013 (red vertical line). Households were grouped according to whether they made less or more than 1.25 USD, and the total volume of mobile-money transaction for each group was plotted. The figure documents that the volume of monthly mobile-money transactions of the group of households with an income below 1.25 USD and the volume of monthly mobile-money transactions of the group of households with an income above 1.25 USD were growing at a similar pace up until February 2013 when the tax was introduced. Thereafter, the volume of transactions of households below 1.25 USD

income grew slower than that of households with a higher income, leading to a 10.9 per cent gap between the transaction volumes of the two groups by August 2013. This seems to suggest that the tax adversely affected the mobile-money transaction volume of households with a daily income below 1.25 USD relative to households with a higher income. All visual inspections remain intuition rather than causal evidence. Figures for monthly remittance volumes broken down by transaction method (i.e. mobile money, cash and in-kind) are provided in the Appendix.

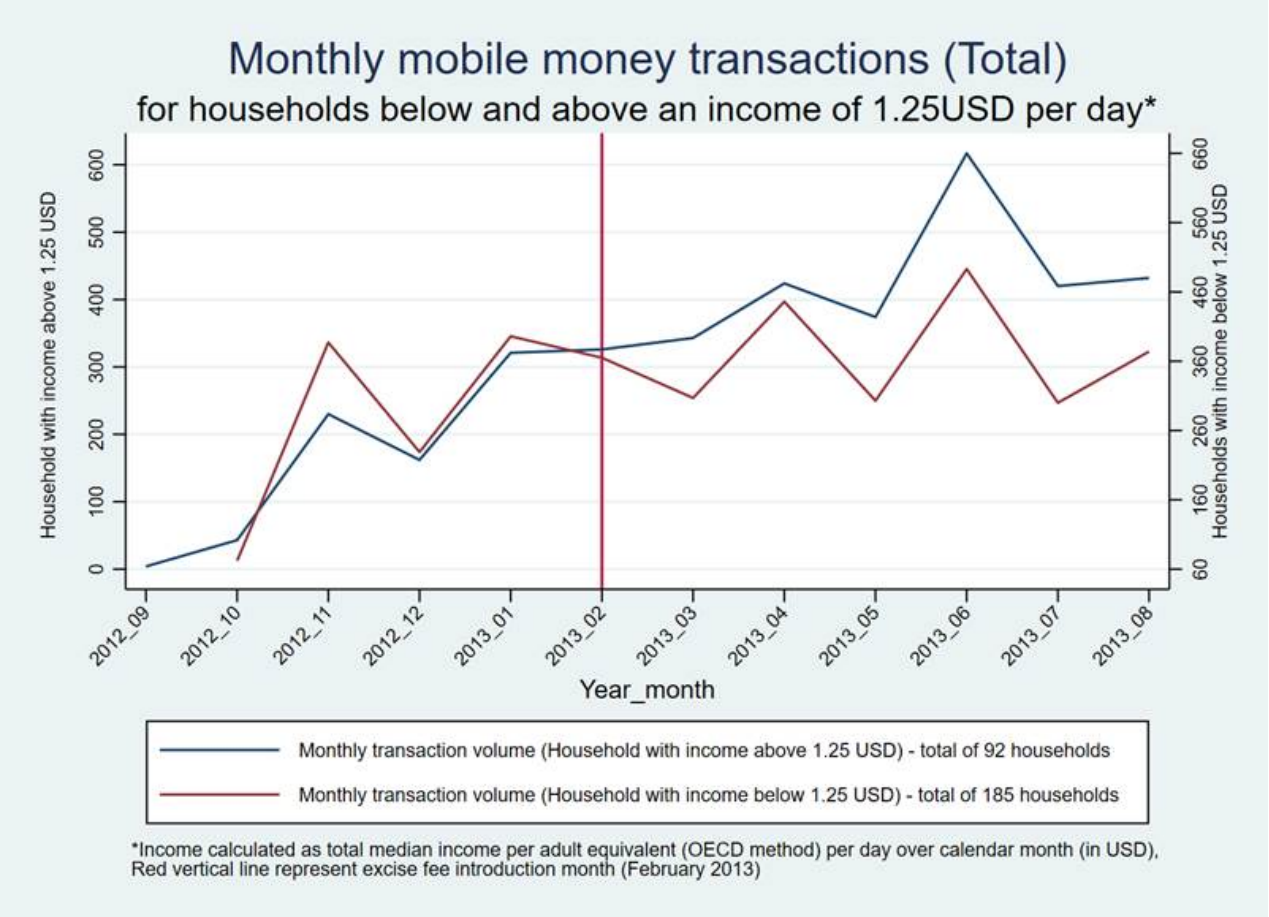

Figure 1: Monthly mobile-money transaction volume for households with income above and below 1.25 USD over time.

Methodology

This paper applies a difference-in-differences estimation strategy to estimate the causal impact that the 10 per cent excise fee had on the monthly mobile-money transaction volumes of households with an income below 1.25 USD per person per day.[1] The difference-in-differences estimator in this paper captures the difference between the actual monthly mobile-money transaction volume made by households with an income below 1.25 USD and the counterfactual transaction volumes these households would have made had the excise fee affected them as it affected households with an income above 1.25 USD per person per day. This gives an estimate of how much more households with an income below 1.25 USD were affected by the tax than households above this threshold. This estimator is also referred to as the average treatment effect (ATE) (Angrist and Pischke, 2009: 228).

The main difference-in-differences regression model (referred to as main specification hereafter) which this paper estimates by OLS is:

$$mobile\ money\ transaction\ (vol)_{it} = \beta_1 (below\ 1.25USD_i \times Post\ tax_t)_{it} + \alpha_i + \gamma_t + \epsilon_{it}$$

where *mobile money transaction (vol)*$_{it}$ is the monthly mobile-money transaction volume of household *i* in the month of year *t* (e.g. December 2012); *below* 1.25*USD*$_i$ is an indicator variable that equals one for households with an average income below 1.25 USD per day and is zero otherwise; *Post tax*$_t$ is an indicator variable equalling one if the data point is for an observation of monthly mobile-money transaction volume made after the excise fee introduction on 1 February 2013 and zero otherwise. The interaction term *(below* 1.25*USD*$_i$ X *Post tax*$_t$*)*$_{it}$ equals one if the mobile-money transaction volume belongs to a household with an income below 1.25 USD after 1 February 2013. The coefficient estimate on the interaction term shows the differential growth in mobile-money transaction volume for households with an income below 1.25USD after the tax introduction compared to transaction volumes of all other households after the tax introduction. This coefficient size gives an estimate of the ATE. α_i denotes the household-fixed effect, γ_t denotes the year-month fixed effect and ϵ_{it} is the error term. In line with Angrist and Pischke (2009) and Bertrand *et al.* (2004), standard errors are clustered at the household level to account for clustering and serial correlation in the error term.

For the ATE to be a causal effect, it is important that the monthly mobile-money transaction volumes of households with an income below and above 1.25 USD respond as similarly as possible to external factors, except for the policy of interest. In other words, the mobile-money transaction volumes of the households with an income below 1.25 USD and the transaction volumes of households with an income above that threshold should move parallelly to each other up until the excise fee is introduced. This condition is referred to as parallel trends assumption. Otherwise, the post-tax mobile-money transaction volumes of the households above the 1.25 USD threshold do not provide a good counterfactual to estimate the ATE because it will be difficult to believe that transaction volumes of households below 1.25 USD income would have grown at the same rate as those of households above the threshold had the tax not been implemented (Angrist and Pischke, 2009: 230).

Figure 1 shows that the monthly transaction volumes of both groups move very similarly up to January 2013. After that, they diverge at the point where the tax was introduced. This shows strong visual evidence of parallel trends. Similarly, parallel trends are visible for monthly volumes of remittances received by cash (Figure 3 in Appendix) and partly also for remittances received in-kind (Figure 4 in Appendix) for the pre-treatment period. For monthly volumes of remittances received by mobile money (Figure 2 in Appendix), however, parallel trends are not visible. Therefore, the paper treats the OLS regression results using remittances as a dependent variable with caution.

To further investigate whether it is reasonable to assume parallel trends, in line with Clair and Cook (2015), a pre-treatment specification test and an event study is performed for mobile-money transaction volumes and values in Table 2 below and Figures 5 and 6 (Appendix), respectively. For all regression calculations, standard errors are clustered to the household level.

	Mobile money transaction (all)					
(Placebo) tax introduction date	1. December 2012		1. November 2012		1. February 2013	
Measure	Volume	Value	Volume	Value	Volume	Value
Column	(1)	(2)	(3)	(4)	(5)	(6)
below 1.25USDxPost tax	0.250	-80.53	-1.250	-161.5	-1.449*	-32.35
	(0.603)	(70.92)	(0.799)	(119.9)	(0.604)	(16.45)
Observations	610	610	610	610	2081	2081

Household clustered, robust p-values in parentheses: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 2: Pre-treatment specification test.

In Table 2, the main specification (Column 5) is compared against the regression results of the pre-treatment specification test. Column (1) runs the main specification, but Post tax is an indicator variable that equals one if the transaction was made after 1 December 2012, and is zero otherwise. Column (2) runs the same regression as Column (1), however Post tax is an indicator variable that equals one if the transaction was made after 1 November 2012, and zero otherwise. Furthermore, the sample size is restricted to observations made before the tax introduction between September 2012 and January 2013. By picking a tax introduction date that is prior to the actual date in a sample before the tax was introduced, Columns (1) and (2) function as a pre-treatment specification test that can pick up any diverging trends between the two household groups before the excise fee was introduced. The coefficient of interest is the coefficient on the interaction term of Post tax and below 1.25 USD income, which should be as close to zero as possible if poor and wealthy households were trending similarly pre-treatment. Indeed, for both Columns (1) and (2), the interaction term is far closer to zero than in the main specification and is statistically insignificant. In that respect, Table 2 provides further evidence that the volume and values of mobile-money transactions for both treatment groups were trending similarly before the tax introduction.

Further evidence for parallel trends comes from the event study in Figures 5 and 6 (Appendix). The event study plots the coefficient size and its 95 per cent confidence interval for the interaction between the indicator variable 'below 1.25USD' and every year-month observation. In Figure 5, the coefficients are plotted for mobile-money transaction volumes, and in Figure 6, they are plotted for total monthly values. The vertical line is present at February 2013, the month in which the excise fee was introduced. Both figures show that the coefficient sizes of the interaction terms were close to zero before the tax introduction and dropped to negative levels after the tax was introduced. This further provides evidence in favour of the parallel trends assumption. Furthermore, the drop in the size of the coefficient post-tax introduction indicates that the ATE estimate in the main specification is likely to be negative, confirming the economic intuition presented in the introduction section.

Results

Main results

Table 3 shows the main results of this paper. For all results, standard errors are clustered to the household level. In Column (1), mobile-money transaction volumes is regressed on 'below 1.25USD'. The coefficient on 'below 1.25USD' shows that households below 1.25 USD income make, on average, 2.6 mobile-money transactions per month fewer than households that have a higher income. This result is statistically

significant at the 1 per cent level. In absolute terms, households with an income below 1.25USD made on average 2.8 transactions (see 'Constant'–'below 1.25USD') per month, while households with higher income made on average 5.4 transactions (see 'Constant'), which is a large difference. One explanation for the usage difference is that poor households were less likely to own a mobile phone, which is essential for the usage of mobile money (Jack and Suri, 2011; Van Hove and Dubus, 2019). Mbiti and Weil (2011) estimate that mobile phone owners made three times as many mobile-money transactions as non-owners. Non-owners were far more likely to come from a low-income background (Aker and Mbiti, 2010).

	Mobile money transactions (all)								
Measure Column	Volume (1)	Volume (2)	Volume (3)	Volume (4)	Volume (5)	Volume (6)	Volume (7)	Volume (8)	Value (9)
Constant	5.417*** (0.538)	4.734*** (0.462)	3.951*** (0.405)	2.509*** (0.577)					
below 1.25USD	-2.617*** (0.551)	-2.575*** (0.541)	-1.419*** (0.431)	-1.142** (0.409)					
Post tax		0.939*** (0.229)	2.016*** (0.585)	1.980*** (0.582)	1.771** (0.575)				
below 1.25USDxPost tax			-1.617** (0.606)	-1.595** (0.604)	-1.423* (0.596)	-1.449* (0.604)	-1.212* (0.526)		-32.35 (16.45)
Top/Bottom quartilexPost tax								-1.477 (0.758)	
Mean household age				0.0335 (0.0200)					
Household size				0.0710 (0.0675)					
Male household head				-0.398 (0.399)					
Living urban				1.035* (0.439)					
Household fixed effects					✓	✓	✓	✓	✓
Month-year fixed effect						✓	✓	✓	✓
Observations	2081	2081	2081	2081	2081	2081	2081	1030	2081
R^2	0.060	0.071	0.078	0.087	0.225	0.048	0.063	0.062	0.028

Constant β_0 is included for result interpretation. Household clustered, robust standard errors in parentheses; * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Regression results – Impact of the excise fee on volume and total value of monthly mobile-money transactions.

In Column (2), 'Post tax' is added to the regression. The coefficient on 'Post tax' shows that mobile-money transaction volume increased overall by an average of 0.9 transactions per month post-tax introduction. The result is statistically significant at a 1 level. These results are in line with the data from the Central Bank of Kenya, which shows that total mobile-money transaction volumes in Kenya increased from 53.5 million in February 2013 to 64.7 million by August 2013 (Central Bank of Kenya, n.d.). Herbling (2013) further suggests that the convenience of the service is a reason why Kenyans did not reduce their transaction volume despite the tax.

In Column (3), the interaction term between the 'below 1.25USD' and 'Post tax' is added. The coefficient on the interaction term suggests that post-excise-fee introduction, households with an income below 1.25USD

reduced their transaction volumes by an average of 0.9 transactions compared to households above that income threshold. The result is statistically significant at a 5 per cent level.

Given that we found robust evidence for parallel trends, the interpretation of the coefficient on the interaction term can be extended. The result indicates that, while households with an income below 1.25 USD made, on average, 3.6 mobile-money transaction per month post tax, had they followed the counterfactual growth trajectory of households with a higher income, they would have made approximately 4.5 transactions per month. This is a reduction in monthly mobile-money transaction volume by 25 per cent compared to the counterfactual – a substantial drop. It suggests that the 10 per cent excise fee that increased transaction fees by the same size disproportionately affected households with an income below 1.25 USD. In line with the economic intuition presented in the introduction section, such behaviour may be explained through the more elastic demand of these households for mobile-money transactions due to their constrained budget compared to households with an income above 1.25 USD.

Robustness checks

Columns (4)–(7) function as a robustness check for the estimates in Column (3). In line with Van Hove and Dubus (2019), Column (4) adds mean household age, household size, an indicator variable equalling one if the household head was male and an indicator variable that equals one if the household lives in an urban area as household-specific time-invariant control variables. This addition controls for potential household-specific characteristics that may bias the result in Column (3). Specifically, Riley (2018) and Van Hove and Dubus (2019) highlight that mobile-money usage differs on a village level – between rural and urban areas. The addition of the urban control variable addresses this potential omitted variable problem (Wooldridge, 2016). The size of the coefficient and the statistical significance for the interaction term change only slightly, suggesting that the coefficient is not driven by these household-specific factors.

In Column (5), household-fixed effects replace the control variables in Column (4). The reason for the usage of fixed effects is that they are able to account for any further time-invariant household-specific characteristic that may affect the transaction volume of mobile money (Wooldridge, 2009: 413).[2] The size of the coefficient and the statistical significance for the interaction term changes only slightly, suggesting that the coefficient is not driven by household-specific factors. This provides further evidence that the drop in transaction volumes for households with an income below 1.25 USD is due to the tax introduction.

In Column (6), a month–year fixed effect is added to the specification to account for possible common shocks over time at a national level. The addition does not affect the coefficient size and standard errors of the interaction term, suggesting that the estimate of the interaction term is also not driven by common shocks over time. Given that this specification is the most demanding in the sense that it accounts for all household-specific characteristics and common shocks over time, it is used as the main specification to which results from further robustness checks will be compared.

As mentioned in the data section, the transaction volume of mobile money is strongly left-skewed. Because the large values on the right tail can bias the OLS estimator (Wooldridge, 2009: 296), in Column (7), the main specification is rerun winsorising the top 1 per cent of mobile-money transaction volumes. The winsorising does not significantly alter the size and significance of the interaction term, providing further robustness to the results.

Another concern to the main specification is that the composition of household classified as 'below 1.25USD' could have changed over the course of the study period. For example, households that were just below the cut-off of 1.25USD on average, and were therefore classified as 'below 1.25USD', could have had a higher income post-tax introduction for an idiosyncratic reason and bias the results through their behaviour aligning more with the households with an income above 1.25 USD. To account for that, in Column (8), the main specification is run with households that are in the bottom quartile in terms of income calculated as total median income over a calendar month per adult equivalent (OECD method) compared with households in the top quartile. The alternative classification has the advantage of excluding the two quartiles in the middle of the income distribution. Given that it is less likely that any household in the top quartile would drop to the bottom quartile within the study period and vice versa, this specification is less prone to bias resulting from composition change. The size and significance of the interaction term stay relatively similar to the main specification, providing further robustness to the result.

Finally, in Column (9), the main specification is run with the monthly total mobile-money transaction values per household rather than monthly volumes of mobile-money transactions. While the coefficient on the interaction term is not statistically significant, the negative size of the coefficient is in line with the results of the main specification.

All in all, the robustness checks provide further evidence that the size and significance of the ATE estimate in the main specification are consistent.

Financial resilience

Table 4 turns to address the effect of the excise fee on the remittances. Remittances made by mobile money, cash and in-kind remittances made up 99.3 per cent of total remittances received by households in the survey, thereby capturing nearly the entire flow of remittances. By comparing the effect of the excise fee on remittances sent by mobile money with remittances sent by cash and in-kind, it is possible to grasp both the overall flow of remittances and the substitution between the transaction methods that the excise fee may have induced. It should be noted that results are only briefly discussed as they do not hold much explanatory power due to limited evidence in support for parallel trends.

Table 4 reports estimates from running the main specification for remittances received by mobile money (Columns (1) and (2)), cash (Columns (3) and (4)) and in-kind (Columns (5) and (6)) separately. In Column (1), (3) and (5), results in terms of volumes – that is, number of remittances received over a month – are reported, while Columns (2), (4) and (6) show results in terms of total value of remittances received over the specific months.

In Columns (1) and (2), the estimate of the interaction term is negative and statistically significant at a 10 per cent level. This suggests that the excise fee not only affected mobile-money transactions more generally, but also remittances sent via mobile money more specifically.

In contrast, there is little evidence suggesting that the excise fee impacted the volumes and total values of remittances received as cash and in-kind. There is no indicative evidence that households substituted remittances received by mobile money with cash or in-kind transactions as an alternative transaction method. However, this conclusion should be seen with caution as the sample size is smaller than for the main results and there is less evidence that the parallel trends assumption holds for remittances.

Transaction method	Mobile money		Cash		In-kind	
Measure	Volume	Value	Volume	Value	Volume	Value
Column	(1)	(2)	(3)	(4)	(5)	(6)
Below 1.25USDxPost tax	-0.542*	-61.79*	0.0240	-9.585	-1.424	17.98
	(0.272)	(28.22)	(0.558)	(7.558)	(1.914)	(12.39)
Household fixed effects	✓	✓	✓	✓	✓	✓
Month-year fixed effect	✓	✓	✓	✓	✓	✓
Observations	810	810	1282	1282	977	977
R^2	0.005	0.036	0.005	0.022	0.032	0.002

Household clustered, robust p-values in parentheses: * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 4: Regression results – Impact of excise fee on remittances received.

Conclusion

This paper has investigated whether the 10 per cent excise fee on mobile-money transactions levied in Kenya on 1 February 2013 disproportionately affected mobile-money transaction volumes of households below an income threshold of 1.25 USD per person a day. The study is the first of its kind to utilise a difference-in-differences estimation strategy to investigate the effect of a price hike in transaction fees on transaction behaviour of vulnerable populations in Kenya. The paper provides evidence that mobile-money transaction volumes of households with an income below 1.25 USD dropped by 25 per cent more than for households above the threshold. The study further indicates that these households would have made 25 per cent more transactions over the study period, had the excise fee not been introduced. Furthermore, the paper offers suggestive evidence that the excise fee also reduced remittances received via mobile money for households below an income of 1.25 USD compared to households with an income above this threshold. The reduction in remittances made by mobile money did not lead to a substitution with other transaction methods, indicating a potential slowdown in the growth of remittances flows to vulnerable households with an income below 1.25 USD compared to households with a higher income.

The findings of the paper highlight the importance of researching the extent to which the price of mobile-money transaction fees affects the transaction behaviour of vulnerable populations. This is because, for mobile money to function as a social protection mechanism, it must be accessible to the most vulnerable people. From a policy perspective, this study also provokes Kenya and other countries introducing mobile-money excise fees to rethink the benefits of such taxes with respect to the effect they might have on the social protection mechanism that the mobile-money service provides.

However, the above findings should also be interpreted with caution. One concern of the study is whether the ATE can be called a causal effect. As mentioned throughout the paper, evidence for parallel trends in some series was limited. Furthermore, it is noteworthy that the results attained in Kenya in 2013 might not apply to other countries and may also not apply to Kenya today as the economy transforms at a rapid pace.

Future studies could replicate the estimation using a control group of households outside of Kenya. With a larger sample size, it may be possible to analyse the flow of remittances with more statistical power and analyse the characteristics of those who send remittances and how they might change with the onset of the excise fee. Furthermore, the advantage of picking a control group outside of Kenya may be that the total effect of the tax on mobile-money usage could be estimated. Households from the CGAP Financial Diaries 2014–2015 (Anderson and Ahmed, 2016) – which tracked transactions of 86 households in Tanzania, a neighbouring country of Kenya, and 93 households in Mozambique, another East African country – may be a promising dataset to pick the control group from.

Acknowledgement

I would like to thank Dr Thomas Martin for his constant support and clear advice. I am also grateful to Dr Gianna Boero for valuable guidance during discussion on the research project.

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Appendix

A. Figures for monthly remittances volume (mobile money, cash and in-kind)

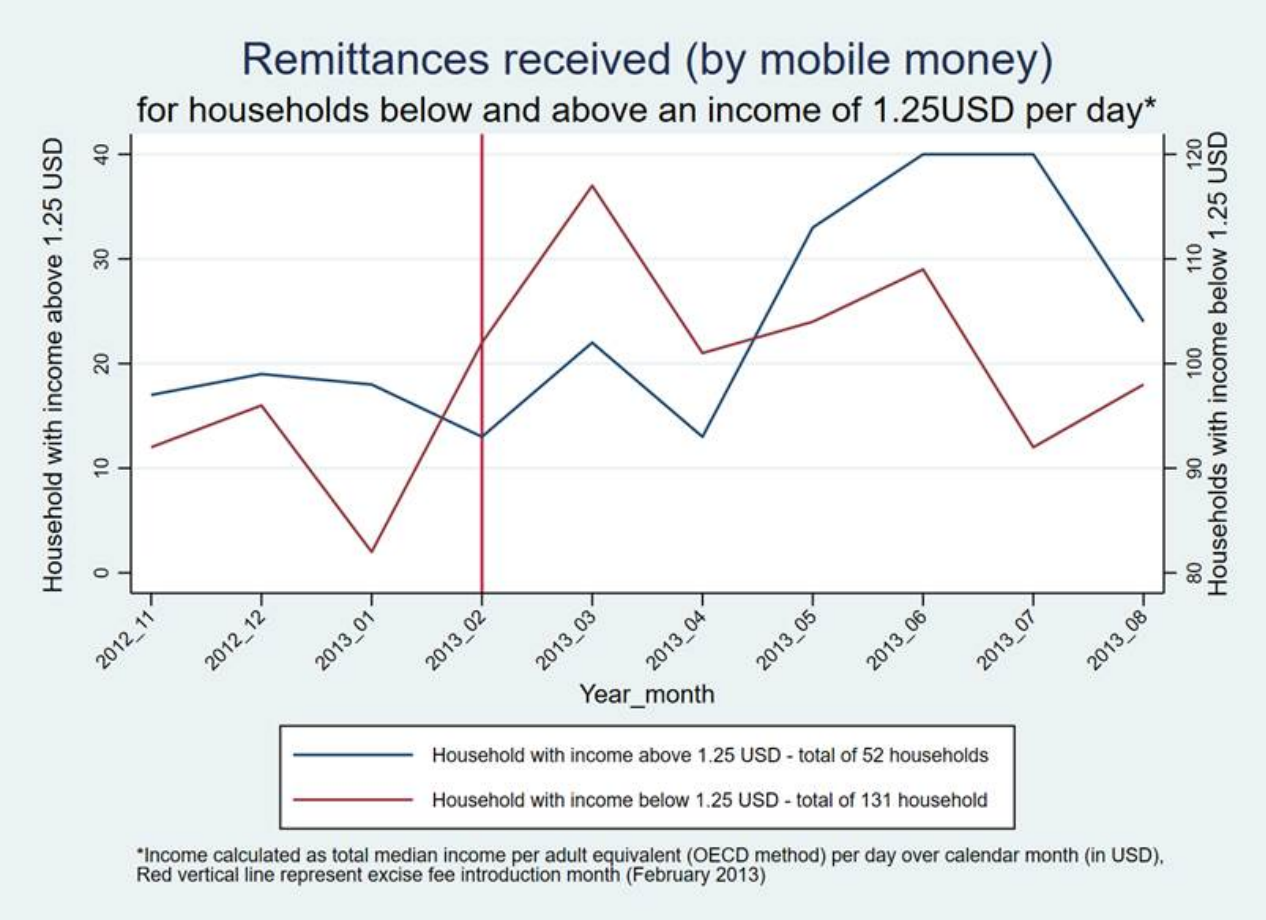

Figure 2: Monthly remittances volume (mobile money) for households with income above and below 1.25 USD over time.

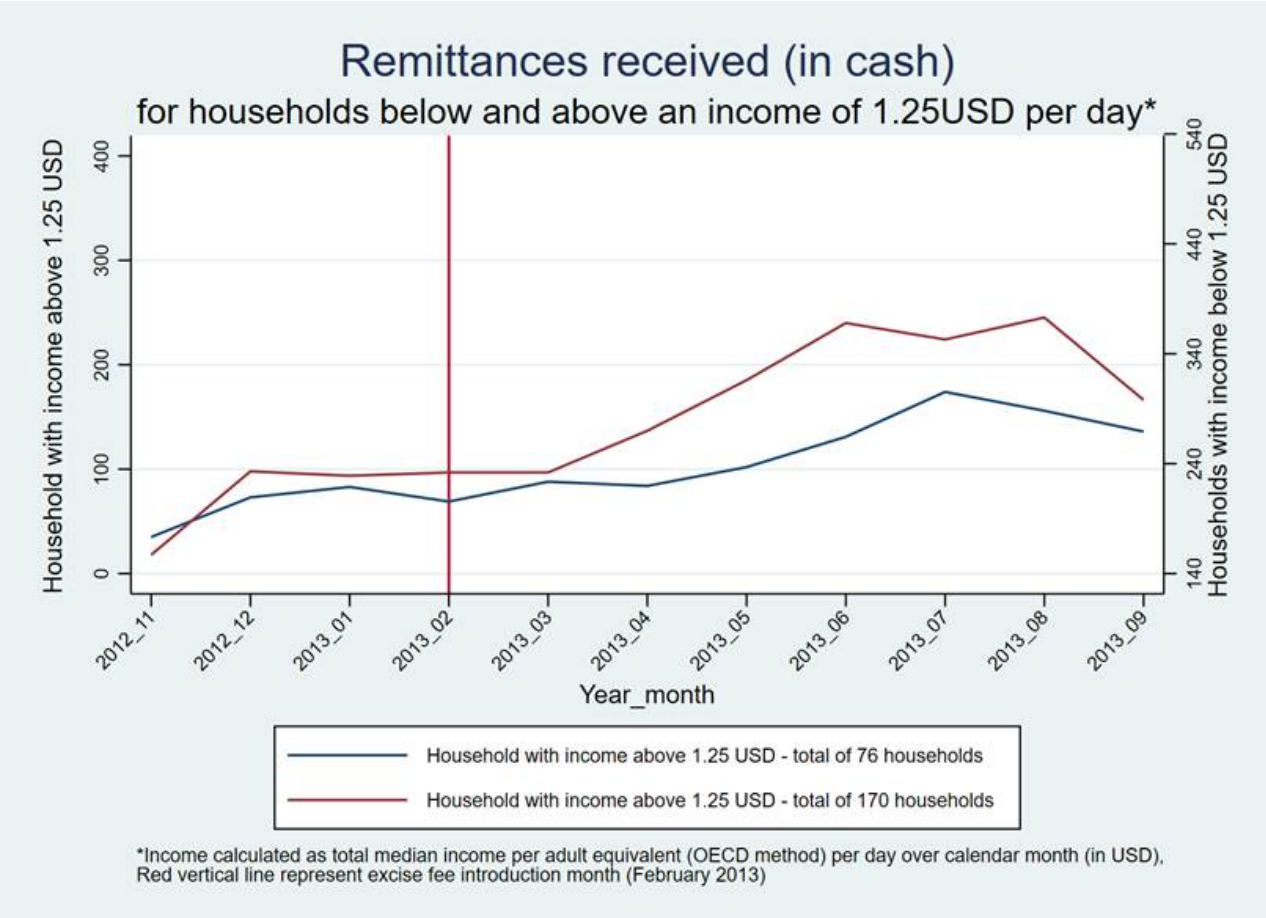

Figure 3: Monthly remittances volume (cash) for households with income above and below 1.25 USD over time.

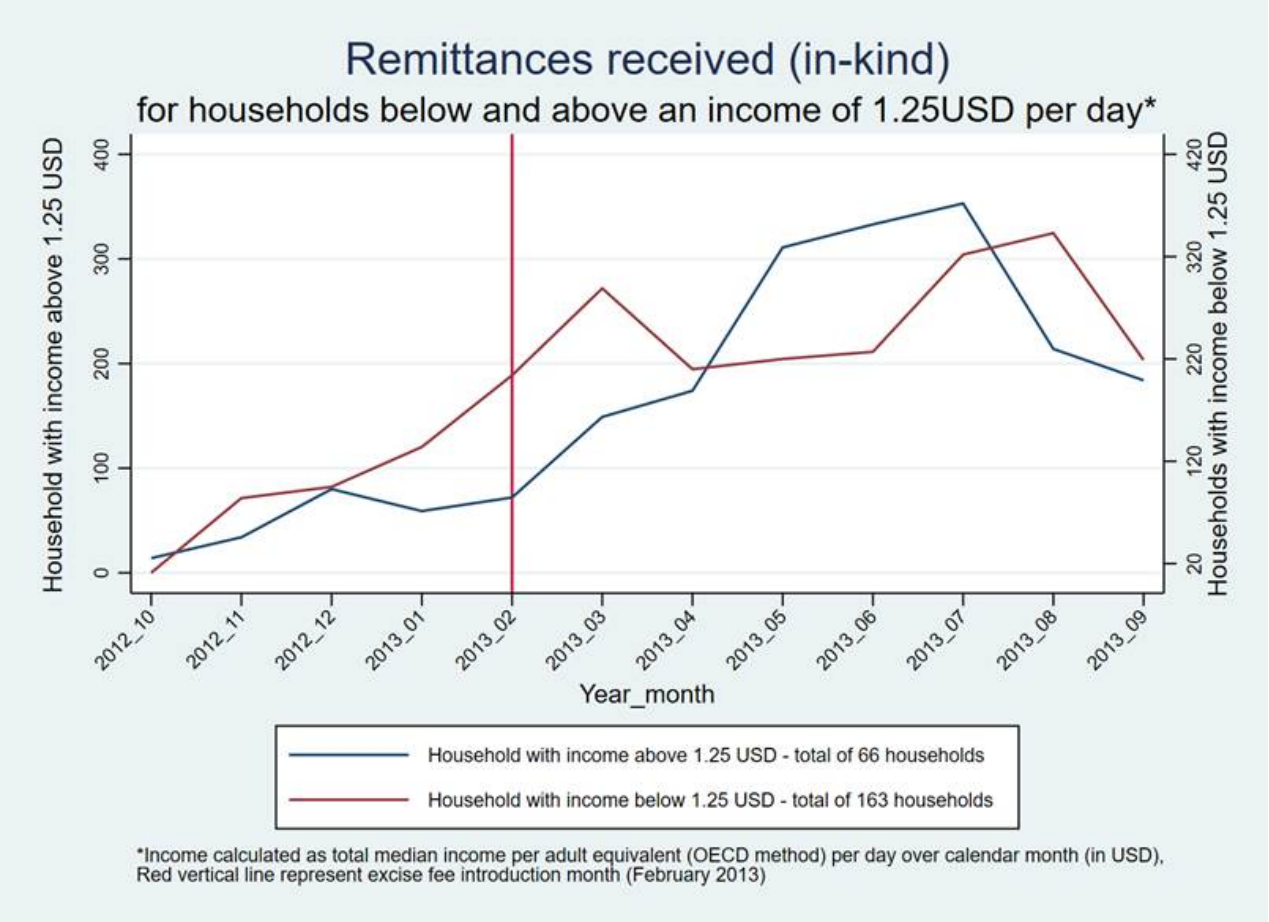

Figure 4: Monthly remittances volume (in-kind) for households with income above and below 1.25 USD over time.

B. Event studies

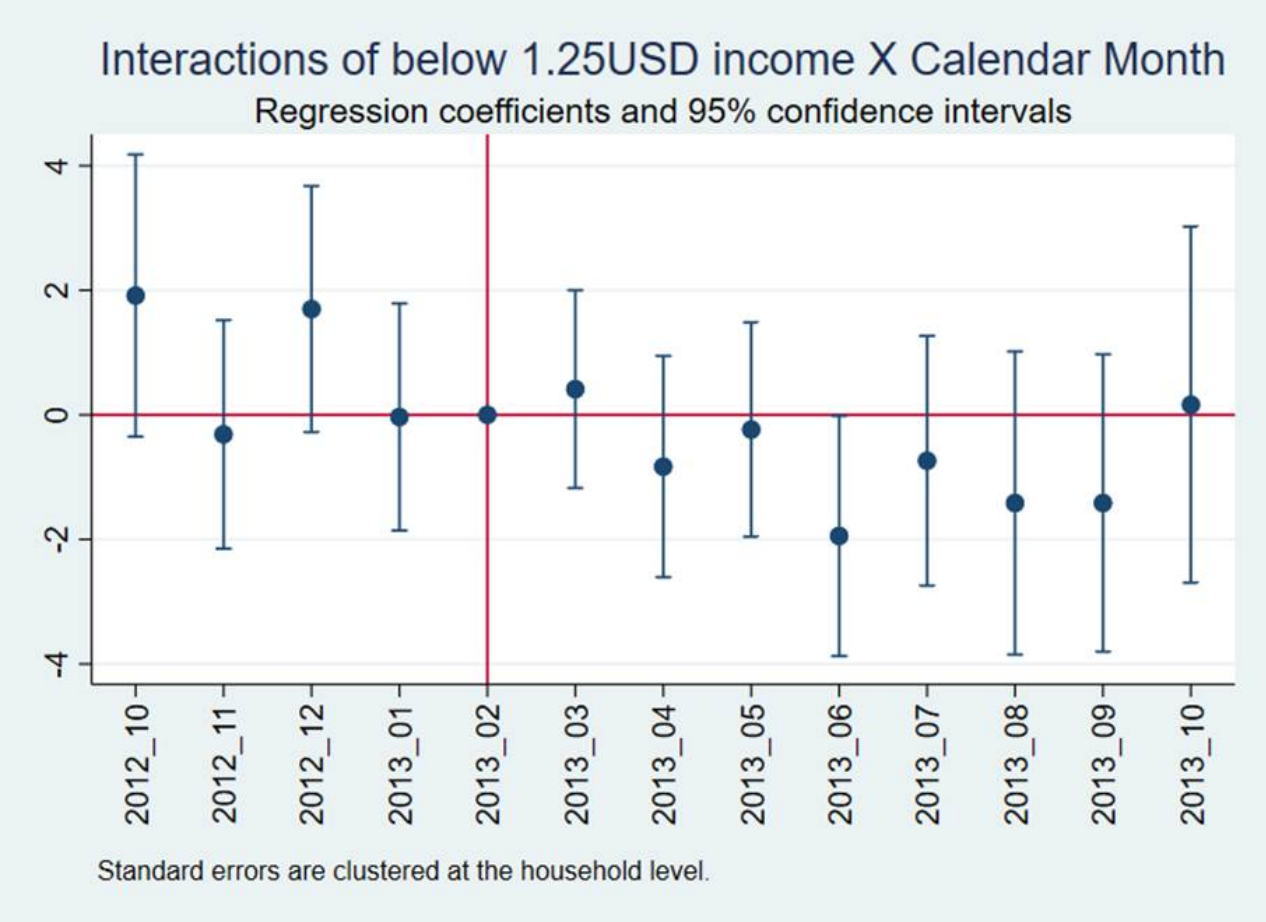

Figure 5: Event study using monthly mobile-money transaction volume.

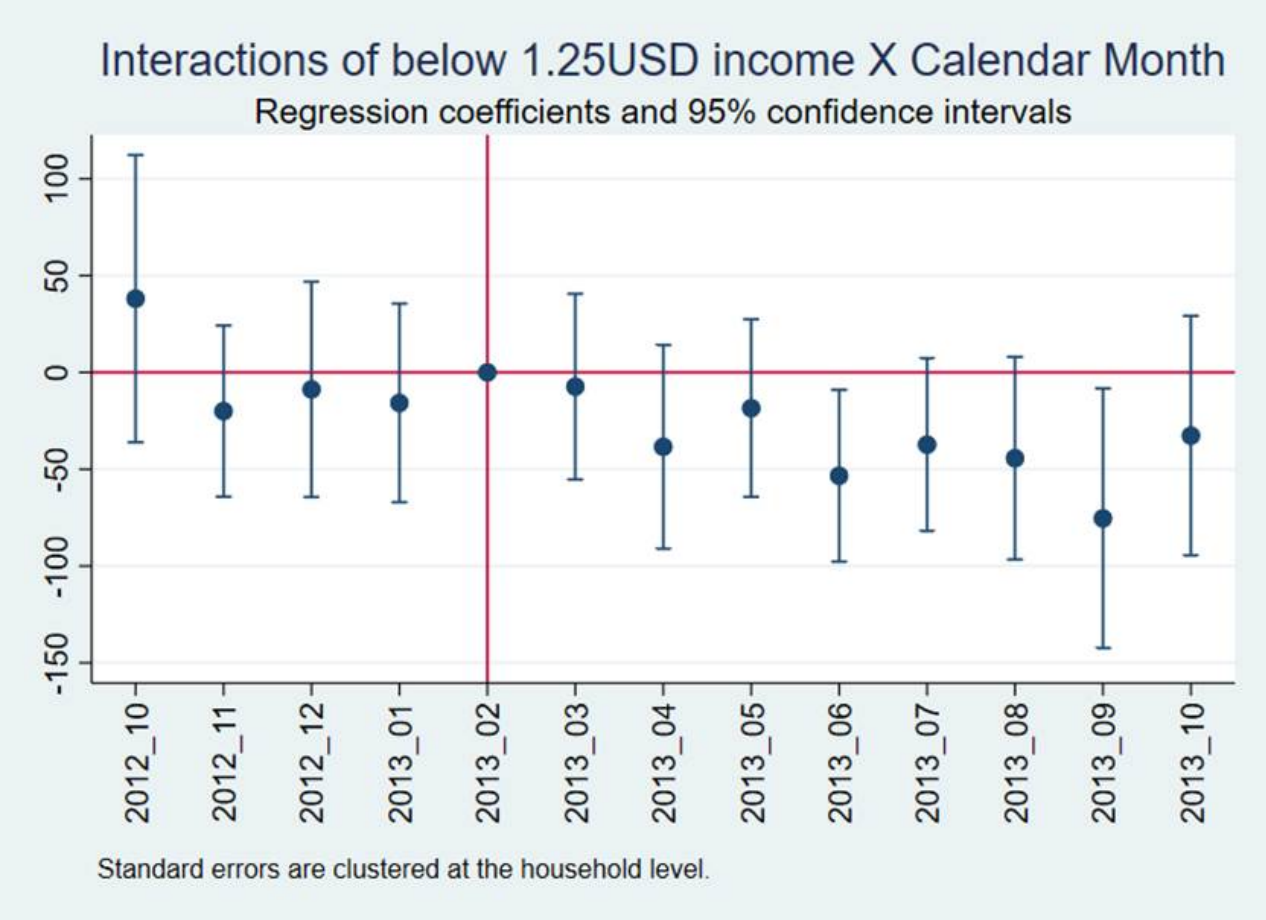

Figure 6: Event study using monthly mobile-money transaction value.

Notes

[1] The same methodology is applied to the analysis of remittances broken down by transaction method (mobile money, cash and in-kind).

[2] The Hausman test confirms the choice of a fixed effects over a random effects model.

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Glossary

Mobile money: Mobile money is a banking service that enables customers to send each other digital values of money directly by way of text messages without needing an internet connection. Apart from sending and receiving money, mobile money can be used to deposit and withdraw money at a mobile-money agent or to directly pay for goods.

Remittances: Informal financial assistance sent between close friends and family.

Excise fee: A tax that is levied on transaction fees charged by mobile-money providers.

Financial resilience: The ability to withstand income and consumption shocks and other forms of financially stressful events such as health problems.

Difference-in-differences estimation strategy: An econometric method that enables researchers to estimate causal effects between two variables of interest.

OLS regression: A statistical method that fits a statistical model as best as possible to the underlying data.

Vulnerable households/people/population: In the development economics literature, it refers to socio-economically disadvantaged people.

Natural experiment: A real world event that naturally split the population into a treated and untreated group in a quasi-random manner.

Pass-through: Passing on additional costs of providing a service / offering a product fully to the customer.

Winsorising: Recode the bottom/top x per cent of the cases in a variable to the values corresponding to the xth and the (100-x)th percentile.

Counterfactual: A thought exercise of how an outcome would have been had a condition been different. In empirical economic literature more specifically, it refers to an causal outcome that would have materialised had one specific condition been different.

Parallel trends assumption: The underlying assumption for the difference-in-difference estimation strategy to yield causal estimates. Visually speaking the assumption states that if two series move together over time, one can more reasonably believe that the series are affected by the external environment in the same way. Hence, when a new treatment shakes up the parallel trends, one can more reasonably argue that the shake-up is due to the treatment rather than over factors.

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Valerie and Her Week of Wonders: Reawakening Czech Cultural Heritage Through the Psychoanalysis of New Wave Surrealism

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Abstract

By 1960, Freudian psychoanalysis was commonplace across Europe. Central to this were the concepts of the id, ego and superego – forces pertinent at both an individual and societal level. In an unhealthy subject, according to Freud, these three psychological components fall out of an ideal dynamic balance and must be restored by an intervening external agent. Freud's theories particularly influenced art – especially the surrealism of the Czech New Wave film movement, which sought to restore the ideal psychological balance by stimulating radical reorganisations of society. A prime example of this is Jaromil Jireš's film *Valerie and Her Week of Wonders* (1970), which aimed to rebalance the unstable Czech social dynamic by provoking the audience to reconnect with their historic cultural values and synthesise these with the goals of Communism. This article analyses three key sequences that exemplify this objective: the first illustrates how Valerie (surrogate for the ego) initially vacillates, but ultimately aligns herself with symbols of Czech heritage (representing the id). The second sequence shows Valerie's ill-fated appeasement strategy of completely aligning with the film's antagonist (superego). The final sequence is a culmination of these themes, posing possibilities for a new Czech future created by the now activated viewer.

Keywords: Freud and the Czech New Wave, Valerie and Her Week of Wonders, Jaromil Jireš and the Czech surrealist movement, Vitezslav Nezval adaptation, Film and psychoanalysis

Introduction: surrealism and maps of the mind

By 1960, Sigmund Freud's psychoanalysis was 'very familiar' (Frank, 2014: 14) to European society, with his central concept, the 'topography' of the mind (Quinodoz, 2018: 73), becoming widely accepted. Here, Freud proposed that an individual's personality is a product of three continuously interrelating psychological agents – the id, the superego and the ego. The id, located in the inaccessible unconscious, is 'the primitive [...] basis of the psyche dominated by primary urges' (Appignanesi, 1999: 156). This is the source of all human instinctual desires relating to survival, including food, water and reproduction. The superego encompasses the psychological 'authority of surveillance' (Quinodoz, 2018: 74) representing an internalisation of 'the standards and prohibitions of our parents and society' (Kahn, 2002: 26), meaning the superego is structured around rules and socially acceptable actions. This is contrary to the id, which is primarily concerned with the immediate satisfaction of base needs. The opposition of these two psychological elements produces the final agent of the mind – the ego. This provides 'executive function [...] of mediating' (Kahn, 2002: 27) the impulsive wants of the id, and the stringent concerns of the superego. In other words, a healthy mind necessarily constructs a sustainable balance between these dynamic psychological forces, as the ego seeks to satisfy base drives within the framework of societal norms. However, when this mental stability is upset, Freud recommends psychoanalytical therapy, in which both patient and therapist collaborate to restore the ideal balance (Appignanesi, 1999: 41).

Although the general population had, by the 1960s, become familiar with Freud, artists had been actively engaged with his concepts for nearly four decades. Surrealists sought to apply Freudian thinking to art. While the term may be used today to describe anything 'slightly out of the ordinary' (Richardson, 2006: 2), surrealism is specifically 'a movement preoccupied with dreams and other imaginative products, and one that upholds the basic Freudian conception of a subjectivity divided against itself, haunted by the repressed impulses of a seething unconscious' (Owen, 2011: 3). While much has been made of the Parisian surrealism produced under the leadership of André Breton, there has been less said about the equally prolific, and influential, Czech surrealist movements. Although surrealism remained a cornerstone of Czech art across the early twentieth century, the lack of widespread understanding of the underlying Freudian concepts meant that surrealism was confined to the avant-garde. However, with the increasing popularity of Freudian terms by the 1960s, mainstream audiences were both able and willing to appreciate surrealist art. This resurgence manifested itself in the films of the Czech New Wave. Jonathan Owen suggests that psychoanalysis provides a 'vocabulary with which to discuss the aesthetics, concerns and discoveries of' the Czech New Wave, and 'help[s] to identify theoretically what [...] the New Wave filmmakers grasped intuitively' (Owen, 2011: 6). Consequently, the surrealism of many Czech New Wave films have been analysed through a Freudian lens, including Josef Skvorecky's reading of Jan Němec's *Diamonds of the Night* (1964) (Skvorecky, 1971: 115–16), Alison Frank's analysis of Jan Švankmajer's New Wave films (Frank, 2014: 57–105) and the numerous Interpretations of *Valerie and Her Week of Wonders* (1970).

However, these readings, by authors such as Owen, Peter Hames, and contemporary reviews, only apply Freudian thinking at the level of the individual. Yet, in *Civilisation and its Discontents* (1930) Freud expanded his psychoanalysis framework to a societal level (Sugarman, 2016: 129). Here, the id encompasses innate cultural and national desires. For example, in the Czech context, the societal id would be the source of the nation's historical democratic impulses (Masaryk, 1974: xvii). The superego represents social norms deriving from institutions like the 1960s Czechoslovak Communist government. Consequently, the individual, the ego, mediates how historic cultural desires are enacted within acceptable societal bounds. Similar to when an individual's psychic structures are out of equilibrium, this social dynamic can also fall out of balance, requiring an external agent (analogous to the role of the therapist) to work with individuals to restore the correct order. External agents can take many forms including, in Czechoslovakia, the surrealism of the Czech New Wave. Here, these films aimed to stimulate radical reorganisation of society through the application of Freudian ideas. With this in mind, this article will illustrate how the film *Valerie and Her Week of Wonders* (henceforth *Valerie*) is an exemplar of surrealist thought striving to rebalance a country whose social psychoanalytical topography had been pushed into instability. This will be achieved by first examining the Czech society at the time of the New Wave, and subsequently focusing on three specific sequences in the film that typify this surrealist goal. The scenes, through surrealist techniques, present objects as vessels of displaced (social) cathexis and thus best illustrate the film's social commentary and political provocations.

Czechoslovakia on the couch: Freud, surrealism and the New Wave

On 23 September 1959, First Secretary Antonín Novotný of the Communist Party of Czechoslovakia (CPCz) proclaimed the 'victory of socialism in Czechoslovakia' (Pánek *et al.*, 2018: 583). However, beneath the veneer of success, the government was facing a national crisis. After the coup of 1948, the CPCz spent the 1950s consolidating its power while inadvertently alienating the Czech people socially, economically and politically. Numerous legislations were passed that ultimately undermined the previously enviable position of Czechoslovakia in Europe, including the introduction of media censorship, the mismanagement of national industry, and the instigation of a 'state of [political] terror' (Pánek *et al.*, 2018: 548–84). From the

standpoint of the Surrealist filmmaker, who saw the world in terms of Freud, the social dynamic had come unbalanced; specifically, the actions of the CPCz were comparable to a superego that has overwhelmed both the functions of the ego (individual citizen) and id (national cultural heritage). Consequently, this disturbed social psyche manifested itself in rapidly growing popular discontent (Pánek *et al.*, 2018: 593–94). In response, the CPCz introduced unprecedented liberalisation throughout the 1960s. For example, at the 12th Communist Congress (1962), an official enquiry was launched into the show-trials of the 1950s which saw the imprisonment of 'thousands of people considered inconvenient by the regime' (Pánek *et al.*, 2018: 559). This marked a move from authoritarian practices towards the more democratic values the nation was founded upon (Chlup, 2020: 189). This trajectory increased exponentially, culminating with the promotion of Alexander Dubček as the First Secretary of the Communist Party of Czechoslovakia on 5 January 1968 – launching the Prague Spring: a period of unprecedented liberalisation. In less than a decade, the country witnessed its transformation from 'a functioning [...] Neo-Stalinist state' (Owen, 2011: 37), to 'a more liberal form of socialism' (Frank, 2014: 62), epitomised by the approval of The Party Action Plan in April of 1968. This legislation 'promised to ensure legal security, civil liberties, liberalisation in culture, media and science' and to implement 'an economic reform based on combining the advantages of state ownership and market forces' (Pánek *et al.*, 2018: 600). Critically, Czech society had managed to synthesise historic cultural values, like 'freedom and independence' (Masaryk, 1974 16), with Communist ideals. In other words, this synthesis led to a successful social psychoanalytical re-balancing.

One key synthesising agent was the Czech New Wave. Prior to cultural liberalisation, the only government-sanctioned mode of art was Socialist Realism, characterised in film by 'classical narrative[s] with an explicit ideological or class basis' (Hames, 2009: 11). These films made clear the importance of the worker as the central pillar of Marxist-Leninist thought. Yet, by 1963, loosening censorship allowed contemporary graduates from the Film and TV School of the Academy of Performing Arts (FAMU) – including Věra Chytilová, Miloš Forman, Jiří Menzel and Jaromil Jireš – to create films that artistically and thematically explored previously taboo subjects. This emerged as the Czech New Wave, a disparate film movement comprised of two cinematic strands. Firstly, there were films that sought to expose the unreality of Czech life presented by Socialist Realism. The directors of these films used a 'cinéma-vérité style' (Frank, 2014: 66) to truthfully depict life under a totalitarian regime. The second strand rejected the mandatory simplicity of Socialist Realism with formal experimentation by adopting surrealism, 'the dominant mode of the Czech avant-garde during the twentieth century' (Owen, 2011: 2). This strand specifically draws upon Freudian methods to re-establish social dynamics by provoking the audience to imagine new forms of innovative social organisation.

However, despite the popularity of the reforms among all strata of Czech society, the nation's success – in its move towards democracy– was viewed as a 'creeping counter-revolution' by other Warsaw Pact countries (Pánek *et al.*, 2018: 603). These countries, therefore, thought it necessary to invade Czechoslovakia on the 20 August 1968 (Pánek *et al.*, 2018: 609) to remove Dubček's reformist government. What followed was an 'age of immobility' (Hames, 2009: 8); the newly installed Soviet-controlled government's policy of Normalisation reinstituted Stalinist practices of 1950s Czechoslovakia, such as censorship, which manifested in cinema as The Big Ban. A controlling social superego once again oversaw Czech society, and with it, the surrealist liberalism of the Czech New Wave came to an end.

Yet, the consolidation of Soviet power through Normalisation was neither immediate nor total. In fact, during the chaotic transfer of power, vestiges of New Wave radicalism slipped through the cracks of censorship. As such, a disparate minority of exceptional films that did not conform to the reintroduction of

Socialist Realism were produced. Despite being released two years after the most often cited end of the Czech New Wave (August 1968), one such film that ardently persevered in its artistic rebuttal of superego dominance was Jaromil Jireš's *Valerie and Her Week of Wonders*. The film is based on Vítězslav Nezval's 1935 novel of the same name, written at the height of his surrealist period (between founding the Czech Surrealist Group in 1934 and embracing Socialist Realism in the late 1940s (Nezval, 2005: viii). *Valerie* began production in the summer of 1969, under the direction of Jireš and with the creative input of Ester Krumbachová – both of whom had prestigious careers during the Czech New Wave. The film was shot on location in Southern Moravia, in the towns of Slavonice and Dačice (*Czechoslovak Film*, 1969), to produce an 'ornately rendered [...] symbol-soaked gothic fairy-tale' (Krzywinska, 2003: 1). The narrative follows the titular thirteen-year-old heroine, who, with the help of her mysteriously magical earrings, attempts to avoid the machinations of voracious vampires and lecherous priests. Although Jireš employs dream logic and symbolism to obscure the film's radical message from the Soviet censors (Frank, 2014: 69), *Valerie* can be viewed as a 'psychological rehearsal' (Owen, 2011: 164). It uses surrealist techniques to provoke the audience to reconnect with historic cultural values (such as 'freedom' in the face of overbearing authority (Masaryk, 1974: xiv)) in a way that synthesises them with the ideals of Communism. The next sections focus on three sequences from *Valerie* that evidences the film's psychoanalytic agency in stimulating societal change.

When an apple isn't an apple: eating to the core of Czech cultural heritage

This first sequence sees Valerie (Jaroslava Schallerová) attending a lakeside meal organised by her grandmother (Helena Anýžová) in honour of the missionary Gracián's (Jan Klusák) visit. This scene exemplifies how the varying and often dialectic elements of *Valerie* act as analogies to Freud's topography of the mind: Valerie represents the ego, Gracián and her grandmother's actions are demonstrative of the superego, and symbols of Czech cultural heritage are emblematic of the id. Initially, Valerie is shown to be ambivalent towards the conflicting interests of the id and superego; however, she ultimately aligns with the latter.

The sequence begins with Jireš making the audience aware of two obvious and seemingly incongruous forces, with the first being the presence of the servants as representational figures. The sequence's establishing shot focuses entirely on these maids sitting among picturesque 'wild flowers' (Krzywinska, 2003: 1) while attending to the spit roasted meal they are about to serve. By immediately drawing the viewer's attention to these characters, Jireš establishes their significance as symbols – a common practice in surrealist works. Specifically, they symbolise the Czech cultural heritage of Poetism.

Developed in the aftermath of the First World War by Karel Teige and Vítězslav Nezval, Poetism reacted to the brutality of the conflict by synthesising the quotidian 'pleasure of existence' (Frank, 2014: 61) with the rational objectives of 'Constructivism' (Sayer, 2013: 241). The resulting dialectic philosophy reconciled 'optimism, playfulness, humour, lyricism, sensuality, [and] imagination' (Volek, 1980: 156) with the pursuit of perfecting man through rational progress. As such, the foregrounding of the servants playfully laughing and eating around the fire without concern for societal rules or etiquette symbolises the lyrical and free-natured tenets of Poetism. The Poetist representation of the servants is therefore an expression of Czech cultural heritage – the societal id.

The second major force presented in this sequence is Valerie's grandmother and Gracián. Unlike the maids as symbols of Poetism, Jireš underscores the repressive authority of these two characters. For example, Valerie complies unquestioningly to her grandmother's demands while Gracián pompously tucks his napkin into his

shirt in a display of overt formality. Additionally, Gracián and Valerie's grandmother are seated at an ornately set table made surreal in its adjacency to the 'beautiful ponds of Southern Bohemia' (*Interview with Jaroslava Schallerová*, 2006). A core operation of surrealism is the 'juxtaposition of diverse objects in new locations' (Frank, 2014: 16). The power of this method stems from Freudian free association, a technique which triggers a spiralling chain of new and unexpected connotations that provoke the subject into reconsidering their habitualised perception of reality. Similarly, the sequence's contradiction of domestic objects located in an obviously undomesticated setting prompts the viewer to consciously re-evaluate the habitualised 'power of authority' (Hames, 2005: 203) and its unnatural position in 1970 Czech society. Thus, Jireš uses the scene and its characters to foreground the dynamics of contemporary Czech society. The maids in their Poetic freedom mimic the Czech id, and its desire for cultural heritage. While it is tempting to conclude that Gracián and Valerie's grandmother stand for religious and maternal authority respectively, this would be superficial and misleading. Instead, Jireš uses these characters as surrealist symbols of a domineering authority, figures of the widespread and amorphous Soviet superego.

Caught between these two forces is Valerie, as shown by the character's costumes. Whereas the servants are dressed entirely in white, Gracián and Valerie's grandmother are both in black attire. Valerie, in contrast, is dressed in grey, providing a visual mediation between these two forces. When Valerie plays on the swing, she reinforces this positioning by quite literally oscillating between the restrictive expectations of these authority figures and the utopian idyll of the maids. Consequently, through her costume and actions, Valerie attempts to function as the ego, to reconcile these disparate forces.

However, the sequence soon shows Valerie breaking this ambivalent position. To begin, Jireš forces the audience to focus on Valerie eating an apple as Gracián provides a monologue regarding his missionary work. Alison Frank suggests that physical items in surrealists works may acquire the status of a hybrid object when assuming a 'disruptive function [...] determined by the multiple layers of resonance that the objects acquire by means of their narrative, thematic and visual roles in the film' (Frank, 2014: 67). With this in mind, Jireš uses the apple as a hybrid object; shots of Valerie eating the apple visually interrupt the cohesion of Gracián's speech. Jireš thus exploits the physical presence of the apple to summon multiple meanings. For example, this imagery conjures biblical connotations of Eve disobediently eating the forbidden fruit (Krzywinska, 2003: 1). Yet, the pastoral setting and the playful manner in which the film presents this act puts it in a positive light, suggesting a purposeful reappropriation of this biblical theme. In effect, Jireš evokes Eve's defiance of God's authority as propitious, therefore suggesting to a contemporary Czech audience the virtue of defying oppressive Soviet authority. A further meaning is prompted by the re-emergence of Jan Hus's ideas in the liberalised 1960's Czech society. Of common knowledge to the Czech audience were the Adamites who, following the teachings of Hus, sought a return to Eden as a means of protesting the Catholic church (Herbermann *et al.*, 1907, vol. 1: 134). Therefore, the apple also works as a unique Czech symbol of defiance of authority. In short, the apple becomes a surrealist hybrid object by containing multiple representations of defiance. To add a Freudian lens, it becomes the physical manifestation of the Czech cultural id within the film.

The scene demonstrates how *Valerie* is constructed around Freud's social topographical model: the active dynamic between the forces of the id (Czech cultural heritage) through the presentations of the maidens and the multiplicity of the apple; the superego (Soviet authority) characterised by the authority figures Gracián and Valerie's grandmother; and the role of the ego (the consciously stimulated Czech viewer) with the positioning of Valerie. In addition, more than just describing the dynamic, this sequence also bolsters the position of Czech national heritage in the mind of the viewer, as Valerie ultimately eats the apple and rejects

Gracián and her grandmother. Accordingly, Jireš has made it clear that resistance is possible in the face of Soviet authority.

Vampires in the catacombs: appeasement is not a strategy

A later sequence sees Valerie trying to save the dying vampire Tchoř (Jiří Prýmek) by killing a chicken and feeding him the blood. Here, Jireš explores how a strategy of appeasement, in which the ego (Valerie) aligns herself completely with the superego (Tchoř), may be a valid option for the cultural survival of Czech society.

The scene opens with Valerie descending into a vast catacomb, earlier revealed to exist beneath her home, in order to save Tchoř, who she believes to be her father. This Gothic setting, brought directly over from Nezval's original novel, is of particular interest. Owen states these 'innumerable underground passageways, crypts, vaults and generally tortuous, enigmatic spaces' seen in the film reflect 'the secret, subterranean dimensions of the Freudian self' (Owen, 2011: 163). Valerie's descending the stairs in the opening shot therefore represents her actively entering the realm of the unconscious. If Jireš had intended to present a Freudian balanced and healthy unconscious, we would expect him to feature both the superego and the id (Kahn, 2002: 26–27). However, this is not the case. Instead, we find Tchoř (the ultimate figure of 'repressive [...] authority' (Hames, 2005: 203) as shown by his numerous shifting manifestations as a priest, a constable, a weasel and Valerie's father) dominating the scene. Effectively, Tchoř encompasses an over-extended superego that denies any space for the id in the unconscious. In the first sequence, we saw Jireš use natural imagery – such as the 'textures of landscape' (White, 2019) evoked by Jan Čuřík's cinematography – to symbolise the innate impulses of the Czech cultural heritage (the societal id). However, this is completely absent in the bleak catacombs, depicting the lack of Czech cultural heritage. The result is an unbalanced dynamic that mirrors the contemporary structure of 1970s Czech society under Soviet rule.

The sequence initially shows Valerie as successful in her attempt to save Tchoř, restoring social balance. This is portrayed implicitly through the medium-closeup framing of Tchoř lying down, with his body entering the screen from the upper right corner, mirroring shots of Valerie that have repeatedly occurred. Hence, Jireš transcribes an optimism onto Valerie's actions by visually symbolising Tchoř's transformation into Valerie, announcing his redemption. Additionally, Valerie's success becomes explicit after she feeds him the required chicken's blood, causing Tchoř to transfigure from 'Nosferatu' (Owen, 2011: 179) into a red-haired figure. This emphasis on a return to the anthropic evokes Dubček's promise of 'socialism with a human face' (Pánek *et al.* 2018: 596). Thus, at this point, the film is hopeful that Soviet control can be reformed, as the apparent redemption of the film's arch-antagonist suggests that Czech society can return to a pre-invasion level of liberalisation through the individual's engagement with the regime on its own terms.

However, this change is ephemeral. No sooner does Tchoř revert to his human state than he rapaciously attacks Valerie, forcing her to feign her death by swallowing one of her 'magic' pearl earrings (Owen, 2011: 169). Superficially, Jireš appears to proclaim the impossibility of returning to the emancipatory atmosphere of the 1960s. Yet, on closer inspection, it becomes clear that the actual purpose of the scene is to caution the viewer's illusory notion that they are capable of transforming the Soviet regime without synthesising it with their Czech cultural heritage. The sequence ending with an abrupt cut to images of Valerie swimming among a picturesque setting just before Tchoř can claim her body blatantly reminds the audience of the existence and importance of the id in the psychoanalytic construction of an idealised Czech society. Resultingly, this sequence is important in demonstrating the capacity of the superego to consume the ego if left unchecked, and its dangerous consequences.

Possibilities and provocations: a new Czech future

As seen, the first sequence analysed saw Valerie initially vacillating, but ultimately aligning herself with signs of Czech heritage. Conversely, the second sequence showed Valerie's ill-fated appeasement strategy of unequivocally aligning with the superego. The film's final scene, however, is one of possibilities and provocations. The sequence sees Valerie wander through a harlequinade forest where she re-encounters all of the film's characters in novel tableaux before finally finding her bed in a clearing and falling asleep.

Jireš has constructed this final sequence around two implicit messages. The first is that change is possible. Like the importance of the underground labyrinth that Valerie visits when trying to save Tchoř, the setting here is also significant. Forests hold a special place within the Czech national psyche. Preceding human settlement, the geography of the Czech Lands was characterised by 'impassable woods' (Pánek *et al.*, 2018: 27) and large, ancient forests. However, these were gradually eroded by the development of farming by early humans, marking the 'separation of man from nature' (Pánek *et al.*, 2018: 40). As such, Valerie's return to the forest is a return to Czech pre-history. With this, Jireš positions the viewer to recognise the possibilities inherent in the future. Furthermore, as Tanya Krzywinska has highlighted, the transformation of the Czech Lands increased exponentiality with the industrialisation of 'the post-war period', leading to 'a decline in agriculture and its particular organisation of the landscape' fuelled by the Communist government's policies (Krzywinska, 2003: 1). Valerie's return to the untouched natural world of the forest propagates the idea that the Czech viewers are capable of returning to an epoch of pre-war democracy. Additionally, the Czech Surrealists, in their fascination with the magic and mystery of folk culture (Cheng and Richardson, 2016: 243), recognised the forest as a symbol of the id, a reservoir of uncivilised man's repressed bestial desires. Not only has Jireš used the forest setting to underline the message that change is possible, he also establishes the desirability of change by presenting one such possibility as the reclamation of the id in a free Czech society.

Furthermore, the possibility of change is further reinforced by the Fellini-like reintroduction of all the film's characters in unique combinations. Peter Hames has suggested this narrative choice is Jireš simply reconciling 'the visions as visions' (Hames, 2005: 207), implying a superficiality that precludes the figures possessing any symbolic meaning. However, a common theme throughout surrealism has been the focus on 'the multi-layered complexity of contemporary existence' (Frank, 2014: 66). This has led surrealists – in a process derived from the Freudian production of dreams – to imbue objects with significance, not because the object itself is important, but because it contains the nuclei of numerous associational connotations held within the unconscious (Frank, 2014: 14). Hence, by Jireš reintroducing characters in the film's finale, he avoids superficial ambiguity and instead represents condensed (Frank, 2014: 14) dream-like associations of meaning, therefore using this surrealist trope to invite the viewer to experience the extensive possibilities of change.

So, while the first of the two implicit messages is that change is possible, the second message is that the viewer is compelled to make such a change occur. This is first illustrated by the scene's lack of narrative conclusion. In fact, the scene actively negates the pastiche romantic happy ending the film provided previously. This return to 'the ambiguous' (Krzywinska, 2003: 1) denies the audience a therapeutic catharsis through a conventional narrative structure. Instead, the audience is left with cathexis: built up 'psychic energy' (Kahn, 2002: 40) generated by the emotional responses to the film (including a sense of 'horror'; Coburn, 2019: 19) that has not been dissipated by a satisfactory conclusion. According to Freud, it is cathexis that motivates human action, as the ego seeks satisfaction by securing the 'elimination of [...] internal

stimuli at their source' (Sugarman, 2016: 48). Jireš uses this final sequence by capitalising on the cathexis that has been generated in the viewer; by denying them any simple relief, the spectator is forced to find another way to satisfy these psychological urges. Hence, *Valerie* aims to provoke the audience into effecting tangible change in the real world. Having spent the entirety of the film being shown surrealist analogies reflecting the contemporary imbalance of Czech society, it is clear that the film hopes to create a psychically activated audience member that is now compelled to dispel these psychological forces by restabilising the currently repressed position of Czech cultural heritage within the Soviet-dominated society. The effectiveness of this call to action is expounded by Jireš's decision to place the film's credits at the opening of the film. This allows a surrealist 'synthesis [...] of dream and world' (Owen, 2011: 184); the film's final fade-to-black undermines a definitive ending and transitions the audience's waking where Valerie has slept.

Consequently, Valerie's walk through the forest inhabited by a barrage of characters beckoning her to join them serves multiple important functions. Firstly, the presence of the film's cast (who have previously been contextualised as comparable to the Freudian dynamics of Czech society) reminds the audience of the real-world stakes of the film. Secondly, the sequence imposes two crucial messages: not only is change possible, but that change can be achieved by the now activated Czech spectator. Jireš purposefully leaves the viewer unaligned with representatives of the id and the superego in order to provoke the viewer into finding their own way towards a new balanced Czech society. Just as the film's characters link hands in a display of utopic reunification, the viewer has been given the potential to reconcile the forces of the id and the superego, Czech heritage and the political establishment.

Conclusion: Valerie again in the twenty-first century

The previous sections have outlined one particular way of reading Jaromil Jireš's *Valerie and Her Week of Wonders*. Specifically, they have demonstrated how the film is structured around the psychoanalytic model of the 'tripartite schema of id, ego and superego' (Sugarman, 2016: 105), refracted through the 'luxuriant multiplicity' (Owen, 2011: 173) of Czech New Wave surrealism. This lens therefore enables two levels of interpretation, with the first being at an individual level. Elements that evoke certain aspects of Czech cultural history – especially Jireš's continued use of 'the tradition[s] of Czech Poetism' (Hames, 2005: 201) – represent the id. The actions and behaviours of the film's antagonistic authority figures portray the role of the superego. Finally, Valerie herself acts as mediator between these two influential forces, making her a surrogate for the ego. Jireš, in a true surrealist spirit, applies these Freudian ideas in a revolutionary manner, hoping to provoke the belief in the viewer that change is both possible and achievable. This gives rise to the second level of interpretation. Now, at a societal level, Valerie (the ego) becomes a substitute for the Czech viewer caught between the film's authority figures of the Soviet regime (superego) and lyrical, pastoral imagery of a unique and historic Czech cultural heritage (id).

In Spring 1970, the Soviet regime introduced the 'Big Ban' in which eight film releases were banned and a further twelve were stopped mid-production (Skvorecky, 1971: 264). Although this did not directly affect *Valerie*, censors thought it necessary to limit the film's distribution (Brooke, 2008), therefore constraining its capacity to effect change on a mass audience. This does not detract from the fact that *Valerie* is fundamentally oppositional, as recognised by twenty-first century commentators (including Owen, Frank, and others referenced above) who have recently excavated this post-invasion cinematic seam. Yet, there exists a cohort of similar films, such as Věra Chytilová's 1970 *Fruits of Paradise*, that remain neglected and would benefit from a Freudian psychoanalysis. In doing so, it will reveal how these films, surrealist and

otherwise, can reawaken communities to their cultural heritage and trigger social transformation, overall providing a better understanding of the power of the cinematic medium.

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Glossary

Avant-garde: Art derived from experimentation in form and content that is often shocking or thought-provoking.

Cinéma-vérité: A mode of quasi-documentary filmmaking that employs the camera as a tool to reveal 'truth' or 'truths' hidden behind everyday life.

Czech New Wave: A disparate film movement sparked the liberalisation of Czechoslovakia in the 1960s, concerned with exploring the truth of daily Soviet life or the formal capacities of the medium of film.

Ego: Emerging from the conflict of the id and the superego, the ego is the mediating psychological force that seeks to satisfy the desires of the id within the bounds of social acceptably demarcated by the superego.

Id: The part of one's psychology, located in the unconscious, home to all instinctual desires.

Normalisation: The official policy of the Czechoslovak government after the 1968 Soviet invasion that aimed to undo the country's prior decade of liberalisation.

Poetism: A Czech literary movement led by Karel Teige and Vítězslav Nezval after World War One that combined carnivalesque fun with the pursuit of rationally perfecting mankind.

Psychoanalytical therapy: The form of therapy pioneered by Freud where patient and therapist use discussions to reveal how past experiences may be affecting the patient's present behaviour with the ultimate goal of restoring a healthy psychology.

Socialist realism: the Soviet Union's official mode of filmmaking that sought to promote the Marxist ideology.

Superego: The part of one's mind formed by the internalisation of rules and acceptable behaviour as taught by one's parents and society at large.

Surrealism: An artistic movement emerging after the First World War that translated Freud's theories from the realm of medicine to the realm of aesthetics.

The Big Ban: The widespread banning of Czech New Wave films as part of Normalisation.

Topography of the mind: Freud's conceptualisation of the mind in which one's personality is the product of three dynamic psychological forces – the id, the superego and the ego.

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Digital Decodings? Becoming-Ungenderable in Online Spaces

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Abstract

The online self is a new kind of body, producing new kinds of affects and offering new opportunities for self-expression. This paper draws on the ontological framework developed by Gilles Deleuze and Félix Guattari in their seminal work *Capitalism and Schizophrenia* (1983; 1987) to explore the operation of gender in digital space. The constitution of the (gendered) self online is understood as a deliberate, measured act, allowing users to curate their identities in ways more fully expressive of their desires than is possible offline. Two possibilities thus emerge: the imposition of gendered subjectivities may be resisted – and perhaps escaped altogether – or the masculine/feminine binary may be further entrenched through the visual medium. In either case, the Internet Age is characterised by more dynamic, creative and intense modes of gender politics.

Keywords: Digital gender studies, self-representation online, xenofeminism, deterritorialisation, Deleuze and Guattari.

Since its appearance at the end of the last century, the internet has developed into a powerful force for social transformation. Although the consequences of this process have been far-reaching, and few could deny its significance, much of the work of studying digital phenomena sociologically remains undone. This paper seeks to explore the ways in which systems of gender have been affected by new forms of self-representation online. The question will be approached through a theoretical framework informed by Deleuze and Guattari's machinic ontology, conceptualising gender as a systemic structuring and over-coding of a body's affects.[1] These two thinkers have a great deal to offer the field of gender studies, but syntheses of their work with staples of feminist thought – such as Connell's concept of gender order and Butler's concept of performativity – remain in their early stages. This article will discuss online technologies of the self (Foucault, 1988) as means by which the flows that constitute the Deleuzian subject can be intensified, accelerated and perhaps liberated from the gender order. Online spaces allow considerable freedom in shaping the presentation of the self, offering users unprecedented means to resist processes of gendering. This paper examines the potential of such utopian glimpses while remaining attentive to reterritorialising processes by which gender norms are upheld. Finally, this paper will conclude that the internet is a site of gender-political struggle where forces that resist the gender order and forces that reinforce it are in constant tension.

The gender-machines

The basic ontology of this article draws on Deleuze and Guattari's concept of bodies – be they the anatomical bodies of human beings or the social bodies of whole cities – as machinic assemblages (Deleuze and Guattari, 1983; 1987). These thinkers identify an unjustifiable privileging of fixed, static identities in Western thought, which they seek to replace with a focus on processes of becoming. The question, derived from the work of Spinoza, is never 'what is a body?', but rather, 'what can a body do?' (Deleuze, 1968). A body is understood to be a network of relations or flows between its parts, which align to produce characteristic affects – a body, in this respect, is a machine. Flows both constitute a body and traverse it,

connecting it to other bodies. A human being is a body constituted by flows of biological matter, ideas, language. The internet is a body constituted by flows of electricity, radio waves, ones and zeros, information, meaning. Self-representation of the body, then, is the work involved in manipulating the body's affects to alter the flows of signification and interpretation between bodies. A Deleuzian analysis is useful in exploring this question because it is resolutely anti-dualist and, as such, is resistant to the most dangerous pitfall facing sociologists studying the internet: the creation of a strict ontological distinction between the online and the offline (Coffey, 2013).

What are the implications of such an ontology for our understanding of gender? First, it is clear that if bodies are to be conceptualised as machines producing affects rather than static identities, any kind of gender essentialism must be abandoned. Instead, gender must be understood to be a dimension of a body's affects, 'one of the ways in which the affective capacities of bodies become organised and produced' (Coleman, 2009: 142). Coffey (2013) synthesises this analysis with Connell's (1987) theory of gender order through the concept of a 'binary machine' (Deleuze and Guattari, 1987). Connell argues that gender is a product of conformity or resistance to hegemonic gender ideals in the form of gendered archetypes – strong, active and dominant 'hegemonic masculinity', and weak, passive and compliant 'emphasised femininity' (Connell, 1987). The binary machine 'territorializes' individuals' bodily affects (Deleuze and Guattari, 1987), forcibly connecting flows of self-presentation, interpretation and desire to these ideal gendered bodies. Challenging gender norms means decoding these flows, forcing a break with the binary machine, scattering affects freely in all directions.

These concepts have some affinity with Butler's (1990) concept of gender performativity. Both conceive of gender as a process, not a stable state; both deny naturalist readings in favour of an emphasis on gender's social contingency. However, there are important differences. Deleuze and Guattari are highly sceptical of the idea of a performing subject. A body's affects, including its gendered affects, are not simply enacted by it, but rather constitute it. Butler's emphasis on subjectivity is consistent with the positionality of her thought, situated as it is within the psychoanalytic tradition – a tradition with which Deleuze and Guattari sought decisively to break. A synthesis between Deleuzian and Butlerian theories of gender would nevertheless be a valuable undertaking, although it is well beyond the scope of this paper.

Decoding gender online

Self-presentation online, much more so than in person, is a controlled, intentional act. Unlike the offline body, which is flesh and blood, the online body is composed of deliberate speech acts – blog posts, comments, images – and there is no affect of this body that cannot be manipulated with a few clicks of a mouse. Thus, body work – the practices that individuals undertake to modify their bodies in day-to-day life (Gimlin, 2007) – is greatly simplified. Sharp and Shannon (2020), writing in the context of queer theory, describe the process of online self-representation as 'identity curation':

> 'Curated' may connote a considered particularity to the kind of embodiments one chooses to perform [...] By piecing together various forms of symbolism, communication, and information, queers construct identities and embodiments that are representative of their most desired self.
> — (Sharp and Shannon: 139)

Through the process of identity curation, users of the internet can gain considerably more agency in their representation of self than they can offline. This is a distinction of quantity and intensity rather than of quality. To put it another way: the offline body is a complex machine, with many parts and many flows

producing affects that are difficult to control, while the online body is a much simpler machine, constituted and traversed by greatly more manipulable flows, producing affects that can be controlled much more easily.

The implications for gender politics are significant. Challenging gender norms means radically transforming one's bodily affects – reconfiguring the flows that constitute the body through a process of body work in order to decode the flows that connect it to other bodies and alter the way they are interpreted. It is tempting to identify the gender-challenging subject par excellence with non-binary people, viewing them as natural enactors of resistance to gender norms. Such naturalism, however, runs the risk of reproducing the very concepts of gender essentialism that Deleuze and Guattari's ontology so powerfully challenges. Applying a Deleuzian analysis to non-binary individuals requires interpreting non-binary-ness, not as a static identity, an innate characteristic of certain types of people, but as a process of becoming – affects and ways of acting that seek to escape systems of gender norms. The term 'non-binary people' in this section thus refers to people actively engaging in these processes, which might be called, in the style of Deleuze and Guattari, becoming-ungenderable. I am here bracketing issues related to the role of subjectivity in these processes, including the question of the extent to which people enacting these kinds of (un)gendered becomings understand them as a form of resistance to hegemonic norms. These are important questions, but the present analysis, with its Deleuzian ontology, is ill-equipped to address them; consequently, I limit myself in the following analysis to a discussion of the possibilities for self-representation created by the internet without claiming to address the way these possibilities are experienced.

Individuals have sought to radically alter the way in which their body is gendered since long before the advent of the internet. But enacting this process offline entails a great deal of difficulty. West and Zimmerman (1987: 133–34) relate an encounter with a person who presented themself in such a way that efforts to gender them were confounded. The description pores over the person's body in minute detail, examining some of the features – facial hair, chest, shoulders, hands, voice and general manner of interaction – that could be used to categorise them as a man or woman. Indeed, West and Zimmerman argue that it is precisely in those cases in which gender is most difficult to determine 'at face value' that scrutiny of the body is most intense (West and Zimmerman: 133–34). A person who does not wish to be gendered offline must undertake considerable body work to alter affects that are interpreted as masculine or feminine. And the more they succeed in this work, the more intensely they will find their body interrogated by the people with whom they interact. Consequently, becoming-ungenderable offline is an arduous process.

The curated nature of online self-representation, however, means that this process is much easier on the internet. Simply by being discerning about photographs they post and using a gender-neutral username, a user of the internet can make their digital body almost impossible to gender. Large regions of the online landscape can be traversed in this way. The game of cat and mouse described by West and Zimmerman – in which the observer strives persistently to gender the observed and the observed strives to avoid being gendered (West and Zimmerman: 134) – plays out online just as it does in person, but here the tables are turned. The intensity of the gendering gaze, its capacity to read the signs of a person's body and thus territorialise it against their will, may frequently be less than the intensity of that person's capacity to manipulate those signs in order to resist territorialisation. The intentionality of online identity curation allows becoming-ungenderable to be enacted with great success.

As well as simplifying the process of altering gendered affects, the internet facilitates the critical exploration of gender identity through the construction of communities of solidarity and safe(r) spaces. For non-binary people, creating networks of support offline is often very difficult. The capacity of the internet to collapse

physical distance and connect like-minded individuals who might otherwise never have met has enabled the development of strong communities in which solidarity is practised in many forms (Yeadon-Lee, 2016: p. 23). Information about non-binary ways of being is shared, allowing users access to 'critical gender pedagogies' (Sharp and Shannon, 2020: 141), such as transition narratives and concrete advice. In these ways, the legitimacy of non-binary bodies is affirmed, and non-binary people gain access to an 'archived toolkit' of techniques for challenging gender norms (Sharp and Shannon, 2020: 143). Online spaces also allow for effective management of risk. People who do not conform to the gender binary are at risk of violent gender policing (Butler, 1990). The element of distance inherent in online interactions means that it is safe(r) to explore one's desired self-representation on the internet (Siebler, 2016).

Through identity curation and communities of solidarity, the internet creates both the means and the space for gender norms to be challenged through radical transformations of bodily affects. These developments, however, are not unprecedented. The great novelty of the internet is not that it produces new types of relations, flows and affects. Identity curation, solidarity and management of risk are all quite possible offline. Rather, the transformative power of the internet is speed. The faster a flow's movement, the more resistant it is to territorialisation (Noys, 2014). As self-representation and self-desire are accelerated and flow with ever-greater intensities, their territorialisation within the binary machine becomes increasingly untenable.

Complications and reterritorialisations

The liberatory promise of internet gender politics should not obscure the ways in which online practices reinforce the gender order. Herring and Kapidzic (2015) provide an overview of tendencies in online self-representation among teenagers, highlighting gender differences. On social media profiles, girls are more likely to emphasise friendship and post 'cute' pictures, whereas boys are more likely to post self-promoting content, with themes including technology, sports and humour, as well as risk-taking behaviour such as alcohol use. Girls are significantly more likely to present themselves using sexualised language on dating sites. In terms of visual representation, girls are understood to be more concerned than boys with representing themselves as attractive. Girls are more likely to post images framed in a suggestive manner, or wearing a suggestive dress, than boys, who are more likely to post images in which they appear dominant, idealised or simply distant (Herring and Kapidzic: 149–50). Girls 'aim to please boys and facilitate social interaction', while boys' online behaviour 'reflect[s] assertiveness in both style and tone' (Herring and Kapidzic: 154).

This data suggests that traditional gender norms are alive and well in teens' presentation of self online. Young people's behaviour reproduces the fundamental binary of ideal gender archetypes – 'the sexually available woman and the strong, emotionally distant man' (Herring and Kapidzic: 150). This is the dynamic, essential to the gender order, between emphasised femininity and hegemonic masculinity (Connell, 1987). Identity curation goes both ways, and the internet's potential to decode systems of gender norms may be matched by its potential to reproduce them. The issue of subjectivity is again bracketed. The extent to which young people attribute their gender-conforming online behaviour to their own agency is an interesting question for empirical study. With regard to the possibilities produced by online bodies, it is clear that the same processes that enable resistance and deterritorialisation also enable acquiescence and conformity.

Two interpretations of this phenomenon offer themselves, depending on which subject is centred in analysis. If an individual user of social media is taken as the subject, these tendencies seem to be nothing

more than the extension of offline gender performances into the online sphere. A teenager moves, speaks, dresses and interacts with others in certain ways offline, performing gender in certain ways, and then they reproduce those performances when they log on to Facebook to post photographs. The processes that produce gendered affects flow smoothly, without a break, from one medium to another.

If, on the other hand, a different subject is centred – the body of the internet as a whole – a different interpretation offers itself. This body, too, is in a perpetual process of becoming. Social media has its origins in the messaging boards and chatrooms of the 1990s and early 2000s. Driven by text, not images, this was an environment in which manipulation of the digital body, including its gendered affects, was perhaps simpler than at any other time[2] (Herring and Kapidzic, 2015: 150; cf. Nakamura, 1995). The increased propagation of images complicated such processes of online self-transformation. The consequences of these developments are discussed in *The Xenofeminist Manifesto*:

> The potential of early, text-based internet culture for countering repressive gender regimes [...] has clearly waned in the twenty-first century. The dominance of the visual in today's online interfaces has reinstated familiar modes of identity policing, power relations and gender norms in self-representation.
> — (Laboria Cuboniks, 2015: 0x13)

The visual turn in social media introduced the tools of gender policing back into the internet. The subversive affects produced by a body whose parts were ungenderable people were thereby blunted. The Deleuzian concept of relative deterritorialisation is useful in understanding this process. Relative deterritorialisation is always accompanied by reterritorialisation. Flows of self-representation territorialised by the gender matrix are deterritorialised through the creation of ungenderable online bodies, and then reterritorialised through the visual turn to produce the kind of affects presented at the beginning of this section (Deleuze and Guattari, 1987).

Conclusions

The tension between the liberatory potential of the internet and the entrenched power of gender norms resembles the collision between unstoppable force and immovable object. The gender order is profoundly embedded in every part of life, and its capacity to territorialise bodies seems limitless. But the power of the internet to accelerate and deterritorialise flows seems just as inexorable. The interaction of these forces turns self-representation online into a site of struggle between processes of becoming-genderless and processes of gender conformity. The utopian possibilities suggested in this essay may remain unrealised, or be realised only incompletely. It is clear that, at present, the internet is a highly ambivalent space for gender politics. But the reterritorialising power of the gender order holds back a vast potential for radically new ways of being – and nobody knows when a break might appear, to bring the whole edifice crashing down...

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Endnotes

[1] Deleuze and Guattari were deliberate in their decision to define the terms they coined obscurely, or to leave them undefined. In doing so, they hoped to force the reader to think in novel ways. The definitions I have provided for characteristic Deleuzian language are only approximations; efforts towards any greater precision would be contrary to the theorists' intent.

[2] Stone's 1991 paper 'Will the real body please stand up?', with its discussion of 'computer crossdressing', is an interesting discursive artefact of that time.

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Glossary

Body: Broadly speaking, an assemblage of parts. It need not be corporeal – an online profile, constituted by a collection of images and text, is a body. For Deleuze and Guattari, bodies are like *machines* in that the relationships between their constituent parts produce new affects. Both these internal relationships and the affects they produce can be understood as *flows*.

Deterritorialisation/reterritorialisation: When a flow *intensifies* and breaks free of the organising structure in which it has been *coded*, it is said to have been *deterritorialised*. *Reterritorialisation* is the process by which flows and bodies are *recoded* within a new organising structure.

Flows: Dynamic processes of change connecting one body to another. Language, for example, is a flow of information. *Coding* (or *over-coding*) is the process by which flows are shaped into bodies. Often this involves the exercise of institutional power. As the *intensity* of a flow (the 'speed' at which an affect is produced) increases, it can be *decoded*, freeing itself from the structures that direct and constrain it. See *deterritorialisation*.

Gender order: A theory advanced by Raewyn Connell. She argues that gender as a social system is organised around the opposed concepts of *hegemonic masculinity* and *emphasised femininity*, broadly associated, respectively, with strength and weakness.

Gender performativity: A theory advanced by Judith Butler. They argue that gender, rather than being an innate characteristic, is acted out in accordance with socially prescribed rules. This view stands in contradiction to an *essentialist* conception of gender, which identifies gender as immutably grounded in a person's identity.

Gender policing: Violence directed against individuals and communities who fail to conform to the roles demanded of them by the gender order.

Xenofeminism: An accelerationist form of feminism that argues for the liberatory potential of digital technologies.

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Preventing Cancer with Turmeric: The Whole is Better than the Sum of its Parts

Megan Bowers, Durham University

Abstract

There is growing interest in the use of natural compounds such as phytochemicals in medicine. Turmeric is known to possess many health benefits and has been used for centuries for culinary and traditional uses. Its most potent phytochemical, curcumin, has been subject to extensive research and exhibits biological activities, including anti-cancer activities. However, it has not been approved for therapeutic use due to poor bioavailability. Recently, efforts have turned to improving its bioavailability, such as the use of adjuvant phytochemicals. Turmeric contains a variety of phytochemicals, many of which also possess anti-cancer activities themselves. In this review, the evidence for the superior bioavailability and chemopreventative activities of turmeric compared to curcumin alone are discussed, and mechanisms that may underlie these observations are highlighted. More research should be done to uncover the interactions of the phytochemicals within turmeric. Most research has focused on the use of curcumin and other phytochemicals as potential adjuvants in cancer treatment. However, a large proportion of cancers, particularly of the digestive system, are preventable, so the current review focuses on the chemopreventative potential of the phytochemicals discussed. Ultimately, consumption of turmeric and other foods rich in phytochemicals should be encouraged to reduce the incidence of cancer.

Keywords: Cancer, colorectal cancer, chemoprevention, turmeric, curcumin, phytochemical

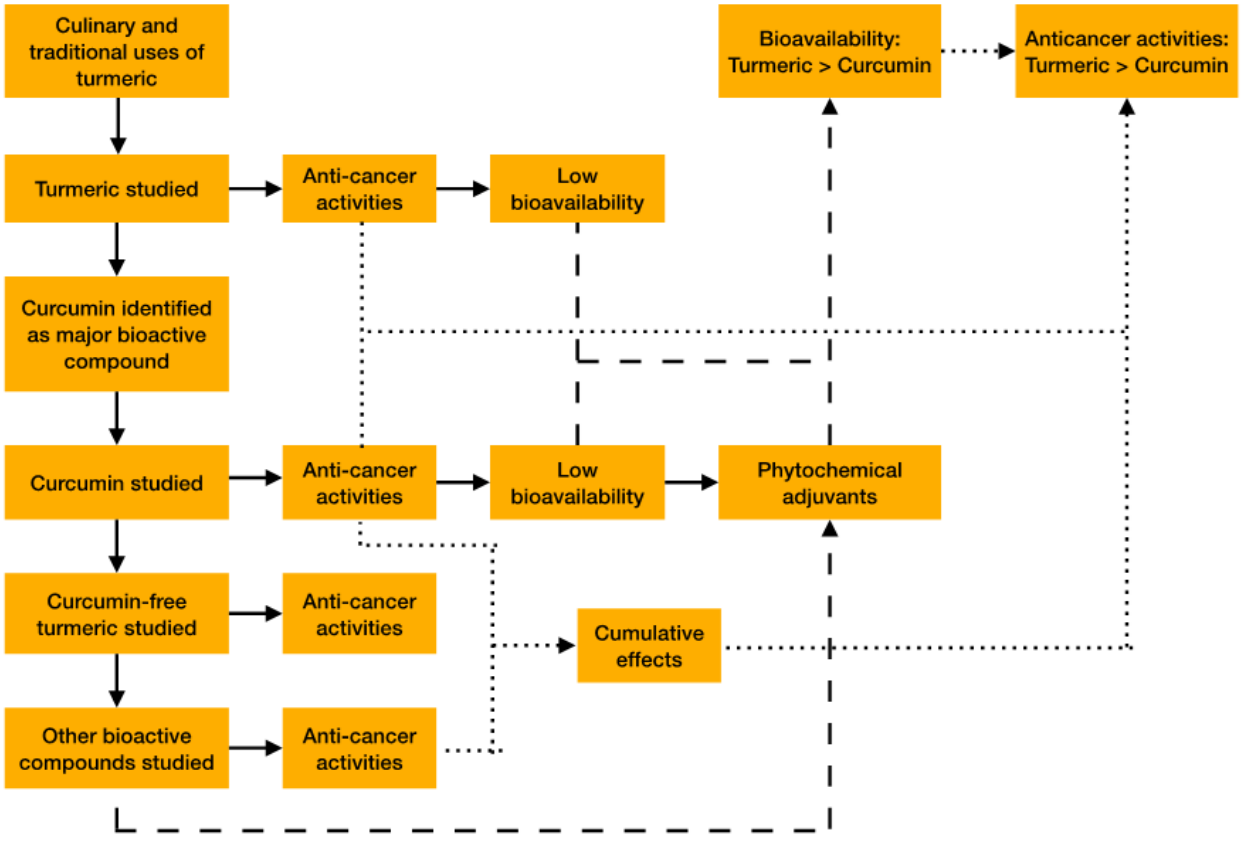

Figure 1: Graphical abstract illustrating the scope of the review.

Introduction

Colorectal cancer (CRC) is the third most common cancer and second leading cause of cancer-related deaths worldwide (WHO, 2022). Substantial global variation exists in the incidence of CRC; in a recent systematic analysis for the Global Burden of Disease Study (GBD), it was reported that Australasia, high-income Asia Pacific and high-income North America had the highest age-standardised incidence rates of CRC in 2017, while south Asia, western Sub-Saharan Africa and central Sub-Saharan Africa had the lowest (GBD, 2017). At least part of this discrepancy is believed to be attributable to Westernised lifestyles – including poor diet and inadequate physical activity, which are associated with risk factors for CRC (WCRF, 2018). As such, there is a significant body of research investigating CRC risk factors, and subsequently, recommendations to avoid and reduce these exposures have been given by organisations such as the Centers for Disease Control and Prevention (2022) and the World Cancer Research Fund (WCRF, 2018).

Less attention has been paid to investigating protective factors – that is, those whose exposure has a chemopreventative effect. However, the growing body of research in this area has produced some promising findings. Turmeric, the dried rhizome of the herbaceous perennial plant *Curcuma longa* Linn, is the focus of the current review. Found mostly in Asia, it has been used for centuries for culinary and traditional uses (Gupta *et al.*, 2013). However, more recently, it has entered the realms of scientific research and its biological activities have been investigated.

Since curcumin was identified as the major bioactive compound in the spice (Kuttan *et al.*, 1985), its multi-targeted chemopreventative activities have been thoroughly investigated. Subsequently, other bioactive compounds present in turmeric have also been identified and studied in this context. However, despite its potent chemopreventative potential, curcumin has not yet been approved for therapeutic use, primarily due

to poor bioavailability. Various delivery system developments have been tested to tackle these limitations. One such method is the use of adjuvants, and numerous studies have found that concomitant administration of other phytochemicals with curcumin can improve its bioavailability. Given that turmeric contains many phytochemicals, this review proposes that more research should be done to uncover the interactions between them. Besides, there is growing evidence that turmeric may be a superior chemopreventative agent than curcumin alone.

The chemopreventative activities of curcumin (Giordano and Tommonaro, 2019) and of non-curcuminoids (Nair *et al.*, 2019) have been reviewed elsewhere, as have the reasons for and methods to improve the bioavailability of curcumin (Liu *et al.*, 2020; Sabet *et al.*, 2021). While this review will provide an overview of these areas and discuss some relevant aspects, the reader is pointed towards these reviews for in-depth discussion of these topics. The aim of this article is to bring together areas of research relevant to the chemopreventative potential of turmeric. To the best of my knowledge, and at the time of writing, this is the first review to combine these topics. The paper begins by describing the bioactive compounds in turmeric and their individual chemopreventative activities, followed by evidence of synergism between them and methods to improve bioavailability. Finally, future directions for research into the potential of turmeric for cancer prevention and treatment are proposed.

Chemoprevention

It has been reported that more than two-thirds of human cancers could be prevented by lifestyle changes, and that dietary factors alone contribute to approximately 35 per cent of human cancer mortality (T. Y. Lee and Tseng, 2020a). For CRC specifically, it is reported that 90 per cent of deaths could be prevented with dietary intervention (Bolat *et al.*, 2020). Despite this, chemoprevention is not often the focus of research efforts.

Many chemopreventative agents are anti-mutagens. Anti-mutagenicity may be exhibited through direct interaction with carcinogens to prevent them from binding DNA or by interfering with enzyme systems to prevent their metabolism. Alternatively, many chemopreventative agents exhibit their anti-cancer activities by acting on signalling pathways. Studies have shown that turmeric exhibits anti-mutagenicity (Polasa *et al.*, 1992; Shalini and Srinivas, 1987, 1990; Srinivas and Shalini, 1991) and interacts with a variety of signalling molecules (Kim *et al.*, 2012; Li *et al.*, 2018, 2021).

Turmeric

Phytochemicals

Due to issues of drug resistance, toxicity and severe side effects from standard chemotherapy, there is growing interest in natural, non-toxic and safe compounds that possess anti-cancer potential (G.-Y. Lee *et al.*, 2020). Phytochemicals are natural, biologically active compounds derived from plants, and extensive research has begun in this area of medicine. Phytochemicals that have been investigated for medical purposes are sometimes called ‘nutraceuticals’, a combination of the words ‘nutrition’ and ‘pharmaceutical’. Many phytochemicals have been shown to possess anti-cancer activities through various mechanisms, including regulating epigenetic changes, inhibiting metastasis, inhibiting cell cycle progression, inhibiting cell signal transduction and promoting apoptosis (T. Y. Lee and Tseng, 2020). While most studies have focused on the potential use of phytochemicals as chemosensitisers and adjuvants in therapy, there is also

evidence of their chemopreventative abilities. Turmeric contains many phytochemicals, and it is these that are the focus of this review.

Chemical composition

There have been 235 compounds identified in turmeric, most of which are either phenolic compounds or terpenoids (Figure 2). Phenolic compounds include diarylheptanoids, diarylpentanoids and some others, while terpenoids include monoterpenes, sesquiterpenes, diterpenes and triterpenes (Li, 2011). Curcuminoids are a type of diarylheptanoids, and the term 'non-curcuminoids' is used to encompass all other components of turmeric. It is now well-established that curcuminoids and some non-curcuminoids exhibit anti-cancer activities. This will be discussed later.

Anti-cancer activities

In 1985, the first study demonstrating the anti-cancer potential of turmeric was published. Ethanolic turmeric extract (ETE) was found to be highly cytotoxic to human leukaemic cells in vitro and also prevented animal tumours induced by Dalton's lymphoma (Kuttan *et al.*, 1985). The authors identified curcumin as being the cytotoxic component and suggested that it may be responsible for the anti-cancer effects of turmeric. In 1987, a follow-up study was published where topical application of ETE to cancerous lesions of human participants had beneficial effects in most patients (Kuttan *et al.*, 1987). This was the first time that turmeric had been studied on human cancer patients. Since these initial findings, many studies have been conducted investigating the anti-cancer potential of turmeric. Given that curcumin had already been identified as the major active ingredient, it became the focus of much of the research that has been done over the past few decades.

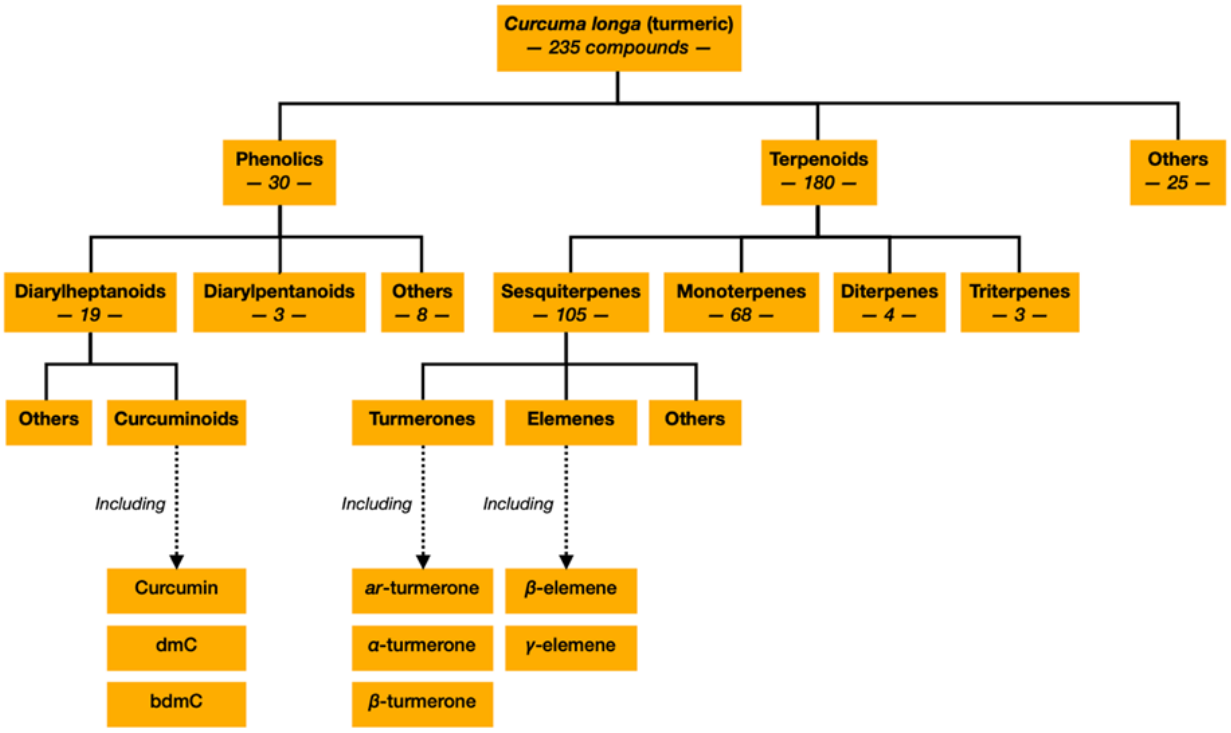

Figure 2: Compounds identified in *Curcuma longa* (turmeric). Figure constructed by author, using information from (Li, 2011).

Curcuminoids

Curcuminoids are the polyphenolic phytochemicals responsible for the yellow-orange colour of turmeric. The total curcuminoid content of turmeric rhizomes is thought to vary from about 2.8 to 10.9 per cent, but this drops to 0.58 to 3.15 per cent in commercial turmeric powders (Li, 2011). The term 'curcumin' is often used interchangeably with 'curcuminoids'; however, curcumin is not the only curcuminoid present in turmeric. Curcumin (diferuloylmethane) has been reported to constitute about 77 per cent of the curcuminoid content of turmeric, while demethoxycurcumin (dmC) and bisdemethoxycurcumin (bdmC) constitute 17 per cent and 6 per cent, respectively (Anand *et al.*, 2007). However, these figures vary slightly across the literature, partly due to variation among different *C. longa* species. Isolation of pure curcumin from turmeric is difficult and time-consuming, so commercial curcumin is usually a mix of these three curcuminoids (Li, 2011). Many studies investigating the effects of curcumin also use this mixture, although some do isolate the different curcuminoids.

Curcumin is by far the most studied curcuminoid. It was first isolated from turmeric in 1815 (Vogel and Pelletier, 1815) and has since been extensively studied for its therapeutic potential. Its purported biological activities include anti-inflammatory, anti-ulcer, anti-viral, anti-bacterial, anti-protozoal, anti-venom, antioxidant, anti-coagulant, anti-hypertensive, anti-hypocholesteraemic, anti-fibrotic, anti-mutagenic, anti-infertility and anti-cancer (Nair *et al.*, 2019). The anti-cancer activities of curcumin are multi-targeted, interacting directly with some proteins and modulating the expression of others (Kunnumakkara *et al.*, 2008). Studies have demonstrated its role in modulating transcription factors (e.g. NF-κB), growth factors (e.g. VEGF), enzymes (e.g. COX-2), kinases (e.g. cyclin D1) and inflammatory cytokines (e.g. TNF), as well as upregulation of pro-apoptotic proteins (e.g. Bax) and downregulation of anti-apoptotic proteins (e.g. Bcl-2) (Shehzad *et al.*, 2013).[1] Due to the large quantity of research into the chemopreventative activities of curcumin, there are a significant number of reviews on the topic (Oyagbemi *et al.*, 2009; Reuter *et al.*, 2008; Thangapazham *et al.*, 2006; Vallianou *et al.*, 2015).

Non-curcuminoids

Curcumin-free turmeric

Despite the fact that curcumin had been identified as the major active ingredient of turmeric, and studies had demonstrated its potent anti-cancer potential, a few studies in the 1990s investigated the activities of curcumin-free turmeric. Early findings indicated that curcumin is the significant chemopreventative agent in turmeric. For example, in a study that assessed the inhibitory effects of aqueous turmeric extract (ATE) and curcumin-free aqueous turmeric extract (CFATE) on the mutagenicity of direct- and indirect-acting mutagens, only ATE was effective (Azuine *et al.*, 1992). In another study, cytochrome P450 enzyme activity as well as DNA-adduct formation was found to be reduced only by curcumin-containing treatments and not by curcumin-free treatments (Deshpande and Maru, 1995). However, some studies found that curcumin-free treatments appeared more effective than curcumin-containing treatments. A study investigating the inhibitory effects of ATE, CFATE and curcumin on micronuclei formation in mice found CFATE to be the most effective (Azuine *et al.*, 1992). Further, in a B[a]P-induced forestomach tumour model in mice,[2] CFATE reduced the tumour multiplicity and incidence to a greater extent than turmeric or ETE (Deshpande *et al.*, 1997). However, when a similar experiment was conducted on a DMBA-induced mammary tumour mode in rats,[3] CFATE was found to be ineffective while ETE and turmeric significantly reduced tumour multiplicity,

burden and incidence (Deshpande *et al.*, 1998). While these findings are conflicting, they provided some indication that compounds other than curcumin may contribute to the chemopreventative activities of turmeric. This led to research into the other bioactive compounds in the spice.

Non-curcuminoids

Non-curcuminoids include all the bioactive compounds in turmeric except curcuminoids. These include phenolic compounds, terpenoids and some others. Non-curcuminoid phenolic compounds include some diarylheptanoids, diarylpentanoids and phenylpropenes, while terpenoids include monoterpenes, sesquiterpenes, diterpenes and triterpenes (Figure 2). Many of these have now been studied for their pharmacological activities and have been found to exhibit chemopreventative activities. These have been extensively reviewed elsewhere (Nair *et al.*, 2019).

There is evidence that curcuminoids and sesquiterpenes show synergistic effects (Nishiyama *et al.*, 2005; Yue *et al.*, 2016), and this will be discussed later. There have been 109 sesquiterpenes identified in turmeric, and they are primarily found in turmeric oil (Li, 2011). Perhaps the most studied sesquiterpenes are turmerones and elemenes, of which *ar*-turmerone and *β*-elemene appear the most promising isoforms. Several studies have demonstrated the chemopreventative activities and therapeutic potential of these phytochemicals (Table 1). However, acknowledgement of this is only very recent and not yet widespread.

Sesquiterpene	Studies showing chemopreventative potential	Reference
***ar*-turmerone**	Promoted apoptosis in human chronic myelogenous leukaemia, rat basophilic leukaemia, human histiocytic lymphoma and mouse lymphocytic leukaemia.	(Ji *et al.*, 2004)
	Upregulated MMP-9 and COX-2 by blocking NF-κB, PI3K/Akt and ERK1/2 signalling and inhibited invasion, migration and colony formation in human breast cancer cells.	(Park *et al.*, 2012)
	Induced apoptosis via ROS generation-mediated activation of ERK and JNK kinases in hepatocellular carcinoma cells.	(Cheng *et al.*, 2012)
	Had cytotoxic effects on lymphocytic leukaemia and myeloid cells.	(Kim *et al.*, 2013)
***β*-elemene**	Induced apoptosis and protective autophagy by inhibiting PI3K/Akt/m-TOR/p70S6K1 signalling in non-small cell lung cancer cells.	(Liu *et al.*, 2012)
	Inhibited proliferation and induced apoptosis and autophagy by inhibiting MAPK/ERK and PI3K/Akt/m-TOR signalling in renal cell carcinoma cells.	(Zhan *et al.*, 2012)
	Reduced proliferation, promoted apoptosis and impaired invasiveness in glioblastoma cells.	(Xu *et al.*, 2006)

MMP: matrix meta-lloproteinase; PI3K: phosphatidylinositide 3 kinases

Table 1: Examples of studies demonstrating chemopreventative activities of *ar*-turmerone and *β*-elemene. Table constructed by author, using information from a review by Nair and colleagues (2019)

Therapeutic limitations of curcumin

Despite its well-established potent bioactivity, tolerance and safety at high doses, curcumin has not been approved for use as a therapeutic agent due to its poor oral bioavailability (Anand *et al.*, 2007; Liu *et al.*,

2020; Sabet *et al.*, 2021). While there are other possible routes of delivery (intravenous, nasal, topical, subcutaneous, intraperitoneal), oral administration is the preferred method of drug delivery because of its convenience, high patient compliance, cost-effectiveness and ease of production (Liu *et al.*, 2020). Reasons for the poor oral bioavailability of curcumin and recent developments in delivery systems to tackle them are discussed below.

Reasons for poor oral bioavailability

According to the Nutraceutical Bioavailability Classification Scheme (NuBACS), the bioavailability of a bioactive compound is dependent on five classes of physiochemical and physiological factors, namely bioaccessibility, absorption, transformation, distribution and excretion (Figure 3). The factors thought to be the main contributors to curcumin's poor bioavailability are its low bioaccessibility, due to poor liberation from plant cell tissues as well as poor solubility in gastrointestinal (GI) fluids, and its transformation into less bioactive products through chemical and metabolic degradation (Sabet *et al.*, 2021). These are discussed further below.

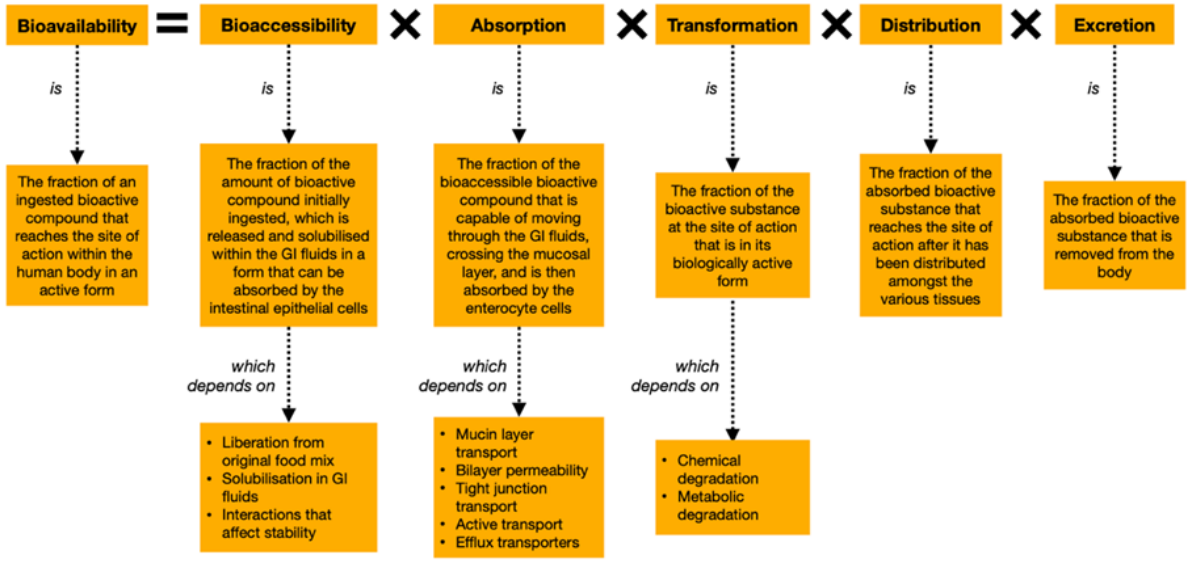

Figure 3: The five classes of factors that contribute to the overall bioavailability of an orally administered bioactive compound, according to NuBACS (McClements, 2018). Figure constructed by author, using information from Sabet et al. (2021).

Bioaccessibility: For any orally administered drug to be bioaccessible, it needs to dissolve in GI fluids. GI fluids are acidic, but the aqueous solubility of curcumin is very low in acidic pH (Liu *et al.*, 2020).

Transformation: Curcumin undergoes two phases of metabolic degradation. In Phase I, curcumin is reduced to the metabolites dihydrocurcumin, tetrahydrocurcumin and hexahydrocurcumin by reductases in the liver (Hoehle *et al.*, 2007; C Ireson *et al.*, 2001) and potentially by *E. coli* in the small intestine and colon (Hassaninasab *et al.*, 2011). In Phase II, curcumin and its metabolites undergo glucuronidation and sulfation, which are catalysed by UDP-glucuronosyltransferase (UGT) and sulfotransferase (SULT), respectively (Ireson *et al.*, 2002), producing curcumin sulfate, curcumin glucuronide sulfate, curcumin glucuronide, dihydro curcumin glucuronide, tetrahydro curcumin glucuronide and hexahydro curcumin glucuronide (Liu *et al.*, 2020). The metabolites of curcumin are thought to be biologically active but substantially less so than curcumin (Zhu *et al.*, 2017).

Methods to improve bioavailability

As discussed above, improving bioaccessibility and reducing transformation should be the focus of delivery system developments for curcumin. Recent studies have trialled a range of delivery methods that have now been the subject of multiple reviews (Araiza-Calahorra *et al.*, 2018; Jiang *et al.*, 2020; Liu *et al.*, 2020; McClements, 2018, 2020). These methods include nanoparticles, liposomes, micelles, emulsions, solid dispersions and adjuvants (Liu *et al.*, 2020). As this review focuses on phytochemicals, the use of them as adjuvants for curcumin is further discussed below.

Phytochemical adjuvants

In pharmacology, an adjuvant is a drug that is co-administered with another drug to enhance its efficacy. Many phytochemicals, such as those in Table 2, have been shown to exhibit chemopreventative activities, and these have been reviewed elsewhere (lycopene: Rowles *et al.*, 2017; piperine: Zadorozhna, Tataranni and Mangieri, 2019; quercetin: Tang *et al.*, 2020; resveratrol: Jiang *et al.*, 2017; silibinin: Jahanafrooz *et al.*, 2018; sulforaphane: Nandini *et al.*, 2020). One recent study assessed the individual and combined effects of quercetin, curcumin, lycopene and sulforaphane on the viability and proliferation of normal and cancerous colon cells. The authors stated that the similar mechanisms by which these four phytochemicals exhibit their anti-cancer activities 'encourages reflection on their impact on the human body when used jointly' (Langner *et al.*, 2019). Interestingly, they found that the anti-proliferative effect of the combination mix was greater than the sum of the individual effects of each of the four phytochemicals in HT-29 cells. While the specific interactions of these four compounds with each other were not investigated, the results indicated that there was some synergism among them. The authors proposed this may be because each compound used exhibits anti-cancer activities via different molecular mechanisms, but it should be noted that it is possible that one or more compounds were acting as adjuvants.

Several phytochemicals have been studied specifically as potential adjuvants for curcumin. Piperine is perhaps the most extensively studied and has been shown to improve the bioavailability of curcumin in numerous studies (Table 3). Piperine, quercetin and silibinin have been shown to inhibit UGTs in the liver (Grancharov *et al.*, 2001; Reen *et al.*, 1993; Williams *et al.*, 2002), and piperine is also thought to inhibit SULTs (Zeng *et al.*, 2017). A recent study found that silibinin, quercetin and tangeretin all reduced curcumin glucuronidation in mouse liver microsomes but, contrary to other studies, piperine did not (Grill *et al.*, 2014). In the same study, an in vivo assessment using mice showed that quercetin, silibinin and piperine were effective at improving post-administration plasma levels of curcumin. The authors proposed that the improved bioavailability of curcumin by piperine in mice may be a result of its effect on curcumin absorption rather than its ability to inhibit its metabolism. Previous evidence has demonstrated that piperine can inhibit P-glycoprotein, an efflux transporter in intestinal epithelial cells that reduces the absorption of curcumin (Bhardwaj *et al.*, 2002). Another study showed that piperine could affect the membrane dynamics and permeation characteristics of the intestines, which could improve its permeability and lead to increased absorption of drugs (Khajuria *et al.*, 2002). However, more research is needed to establish the underlying mechanisms that are responsible for the observed improvements in bioavailability.

A note on colorectal cancer

The relatively large fraction of orally administered curcumin that is not absorbed by the intestinal epithelial cells ends up passing through the colon and rectum to be egested in faeces. Thus, curcumin may be of most

use for CRC. Many studies have focused their investigations on this area of the digestive system and used CRC cell lines and xenografts to study the chemopreventative activities of curcumin. These have been extensively reviewed (Johnson and Mukhtar, 2007; Weng and Goel, 2020). However, by the time curcumin reaches the colorectal area, it has been subjected to a significant amount of metabolic degradation. Thus, it would still be beneficial to reduce the transformation of curcumin through delivery systems like the ones described previously. The use of nanoformulations of curcumin specifically for the treatment of CRC has been recently reviewed (Wong *et al.*, 2019).

Name	Type	Sources
Piperine	Polyphenol	Long pepper and black pepper
Quercetin	Polyphenol	Various fruits and vegetables Examples: apples, onions
Silibinin	Polyphenol	Milk thistle
Resveratrol	Polyphenol	Various fruits and vegetables Examples: red grapes, red onion
Lycopene	Carotenoid	Various fruits and vegetables Examples: tomatoes, watermelon
Sulforaphane	Carotenoid	Cruciferous vegetables Examples: broccoli, cabbage

Table 2: Examples of phytochemicals that have chemopreventative activities and have been trialled as adjuvants for curcumin. Table constructed by author.

Studies using piperine as an adjuvant for curcumin	Reference
Piperine increased the serum concentration and time to maximum and decreased the elimination half-life and clearance of curcumin in rats and humans.	(Shoba *et al.*, 1998)
Piperine enhanced the effect of curcumin on breast stem cell self-renewal.	(Kakarala *et al.*, 2010)
Piperine attenuated the morphological, histopathological, biochemical, apoptotic and proliferative changes in the liver and serum by curcumin.	(Patial *et al.*, 2015)
Piperine potentiated the inhibition of mTORC1* signalling by curcumin in human intestinal epithelial cells.	(Kaur *et al.*, 2018)
PiperineEmulsomes additively contributed to the chemopreventative effects of CurcaEmulsomes on HCT116 cells.	(Bolat *et al.*, 2020)

Table 3: Examples of studies testing piperine as an adjuvant for curcumin. Table constructed by author.

Is turmeric the best option?

As discussed previously, there is strong evidence that co-delivery of phytochemicals can improve the bioavailability and therefore the chemopreventative activities of curcumin. Given that turmeric naturally contains many phytochemicals (Figure 2), it is reasonable to hypothesise that treatment of turmeric in its entirety may be a more effective chemopreventative agent than just curcumin. A handful of studies have investigated this line of reasoning, and these are discussed below.

Carotenoids are a group of phytochemicals that belong to the tetraterpene family and are known to exhibit anti-cancer activities (Milani *et al.*, 2017). Previously, the carotenoids lycopene and sulforaphane were

mentioned regarding a study where a mix of lycopene, sulforaphane, quercetin and curcumin showed synergistic effects on colon cancer cells (Langner *et al.*, 2019). While the different phytochemicals were not tested for their individual synergistic effects with curcumin, two out of three of the phytochemicals delivered with curcumin were terpenes. To that end, it is reasonable to propose that other terpenes may also show synergistic effects with curcumin. Turmeric does not contain tetraterpenes, but does contain a large array of other types of terpenes, such as sesquiterpenes (Figure 2). In fact, sesquiterpenes and curcuminoids in turmeric have been indicated to have synergistic effects in relation to blood glucose levels in type II diabetes (Nishiyama *et al.*, 2005). While there has not been much research into the interactions of the phytochemicals in turmeric, a handful of studies have compared the bioavailability and the chemopreventative potential of curcumin administered alone or in turmeric (with an equal amount of curcumin).

In one study, the effects of curcumin and ETE were compared in colon-cancer xenograft-bearing mice. While curcumin inhibited tumour growth by 26.6 per cent, ETE inhibited it by 38.9 per cent (Yue *et al.*, 2016). ETE also significantly reduced tumour weight and increased the apoptotic area to a greater extent than curcumin, but quantitative results were not reported. In the same study, the presence of turmerones was shown to enhance the inhibitory effects of curcumin on human colon cancer cell lines, and it was concluded that there was a strong indication of synergism. In another study, turmeric was found to be more potent than curcumin at inhibiting the growth of various human cancer cell lines, namely myelogenous leukaemia, colon adenocarcinoma, pancreatic cancer, breast and multiple myeloma (Kim *et al.*, 2012). Interestingly, in a study that separated the three major curcuminoids in turmeric (curcumin, dmC and bdmC), turmeric extract exhibited a similar level of inhibition of human lung cancer cell viability to dmC and bdmC at lower concentrations (2–5µg/ml) but was more inhibitory at higher concentrations (Kukula-Koch *et al.*, 2018). At 10µg/ml, turmeric extract inhibited cell viability by 70 per cent, while the same concentration of dmC and bdmC showed 60 per cent inhibition, and curcumin showed hardly any. This was consistent with other studies which had investigated individual curcuminoids and found dmC and bdmC to be more effective chemopreventative agents than curcumin (Basile *et al.*, 2009; Thapliyal and Maru, 2001; Yodkeeree *et al.*, 2009).

These studies demonstrated that turmeric exhibited more potent chemopreventative activities than curcumin alone, but whether this was a result of the cumulative anti-cancer activities of individual compounds or because of adjuvant/synergistic effects was not able to be established. However, some studies have investigated the bioavailability of curcumin when administered alone or in turmeric (with an equal amount of curcumin). One study found that a turmeric diet given to rats led to a significantly higher concentration of curcumin in the intestines than a curcumin diet (Martin *et al.*, 2012). This led the authors to conclude that curcumin delivered in turmeric had a higher bioavailability than curcumin alone. While the authors did not specify, it appears that the measurements were of curcumin only and not its metabolites. Thus, the markedly higher concentration of curcumin in the intestine when it was administered in turmeric suggests either that it was more bioaccessible (perhaps more soluble in GI fluids) and/or that it was more protected from metabolic degradation. Additionally, the smaller yet notable increase in curcumin concentration in serum indicates that more curcumin was absorbed when it was administered in turmeric. This is consistent with findings by another set of researchers who investigated the role of turmerones, a sub-group of sesquiterpenes, in turmeric. In one study, an in vitro Caco-2 cell monolayer model was used to investigate the effect of turmerones on the transport of curcumin, and it was found that the presence of turmerones increased the accumulation of curcumin inside colonic cells (Yue *et al.*, 2012). Another study investigated the effects of turmeric and curcumin on glucuronidation (catalysed by UGTs) and sulfation (catalysed by SULTs) in Caco-2 cells. Given that these conjugation reactions are involved in both the

metabolic activation of carcinogens and the metabolic degradation of curcumin, a higher level of inhibition is desirable. They found that turmeric and curcumin inhibited sulfation to a similar extent, but that turmeric inhibited glucuronidation more so than curcumin (Naganuma *et al.*, 2006). This indicates that compounds in turmeric other than curcumin may also inhibit glucuronidation and could be one of the mechanisms underlying the improved bioavailability of curcumin when it is delivered in turmeric.

Together, these studies provide evidence that other compounds in turmeric can improve the bioavailability of curcumin; turmerones can improve its absorption in the intestines and other compounds could be involved in inhibiting its metabolic degradation, but it is not yet known which. The improved bioavailability of curcumin in turmeric could at least partly account for the improved chemopreventative potential of turmeric that has been demonstrated; however, it is also possible that the cumulative anti-cancer activities of the compounds in turmeric contribute to this superiority. More research should be done to address these uncertainties and to deduce the underlying mechanisms.

Future directions

The chemopreventative effects of curcumin are well-established in the literature, but its low bioavailability has presented issues of clinical efficacy. It has been demonstrated by several studies that treatment with turmeric can lead to better therapeutic outcomes than treatment with curcumin alone. Given the chemopreventative effects of many non-curcuminoids, it is likely that there is a cumulative effect of the chemopreventative activities of the compounds in turmeric. However, a handful of studies have shown that curcumin delivered in turmeric may have improved oral bioavailability than when it is administered alone, and so this is likely to contribute to the improved chemopreventative effects of turmeric shown in other studies. The potential for phytochemicals to act as adjuvants to improve the bioavailability of curcumin has been well-established. However, given the small number of studies comparing the chemopreventative potential and bioavailability of turmeric and curcumin, and the even smaller number investigating the interactions underlying this, more investigation should be done to confirm these findings to establish whether turmeric truly is the superior treatment. If this proves to be the case, it should be the focus of clinical trials rather than curcumin alone. This view is shared by the authors of some of the key studies discussed previously, and was expressed in their recent review (Lau and Yue, 2020).

The use of phytochemicals is an area of interest for both cancer prevention and treatment. There is a need for alternative and adjuvant therapeutics due to the severe side effects of traditional treatments as well as the emerging and serious issue of chemotherapeutic drug resistance. However, as mentioned previously, it is reported that a significant proportion of cancers can be prevented through diet, particularly those cancers of the digestive system such as colorectal cancer. Thus, more focus should be aimed at chemoprevention. Given their natural presence in the diet, increased intake of turmeric and other foods containing phytochemicals should be encouraged to reduce the incidence of cancer.

Acknowledgements

Thank you to my supervisor, Dr Gillian Campling, for your much appreciated support and guidance throughout the process of writing this review.

List of figures

Figure 1: Graphical abstract illustrating the scope of the review

Figure 2: Compounds identified in *Curcuma longa* (turmeric). Figure constructed by author, using information from (Li, 2011)

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[1] NF-κB, nuclear factor kappa-light-chain-enhancer of activated B cells; VEGF, vascular endothelial growth factor; COX, cyclooxygenase; TNF, tumour necrosis factor

[2] B[a]P, benzo[a]pyrene

[3] DMBA, 7,12-dimethylbanz(a)anthracene

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Glossary

Adjuvant: A treatment that enhances an existing medical regimen, as a pharmacological agent added to a drug to increase or aid its effect (The American Heritage Medical Dictionary).

Apoptosis: Programmed cell death (Farlex and Partners Medical Dictionary).

Bioavailability: The degree to which a drug or other substance becomes available to the target tissue after administration (Miller-Keane Encyclopaedia and Dictionary of Medicine, Nursing, & Allied Health).

Carcinogen: A substance that causes cancer (Miller-Keane Encyclopaedia and Dictionary of Medicine, Nursing, & Allied Health).

Chemoprevention: The use of chemical agents, drugs, or food supplements to prevent the development of cancer (The American Heritage Medical Dictionary).

Chemosensitiser: Any of several compounds that make cells, especially tumour cells, sensitive to chemotherapeutic agents (The American Heritage Medical Dictionary).

Curcuminoid: Any of several polyphenols, including curcumin, found in turmeric and other species in the genus Curcuma (The American Heritage Medical Dictionary).

Cytotoxic: Of, relating to, or producing a toxic effect on cells (American Heritage Dictionary of the English Language).

Epigenetics: Changes in the way genes are expressed that occur without changes in the sequence of nucleic acids (Farlex and Partners Medical Dictionary).

Metastasis: A secondary cancerous growth formed by transmission of cancerous cells from a primary growth located elsewhere in the body (The American Heritage Medical Dictionary).

Mutagen: A substance or agent that can induce genetic mutation (Collins English Dictionary); **Anti-mutagen** A factor that interferes with the mutagenic actions or effects of a substance (Farlex Partner Medical Dictionary).

Phenolic: Of, relating to, containing, or derived from phenol, an aromatic organic compound (The American Heritage Medical Dictionary).

Phytochemical: A non-nutritive bioactive plant substance, such as a flavonoid or carotenoid, considered to have a beneficial effect on human health (also known as phytonutrient) (The American Heritage Medical Dictionary).

Proliferation: Growth and reproduction of similar cells (Medical Dictionary for the Health Professionals).

Synergistic: The combined action of two or more processes is greater than the sum of each acting separately (Gale Encyclopaedia of Medicine).

Terpenoid: A class of chemical compounds including all terpenes, a naturally occurring chemical compounds found in plants and some animals. (The American Heritage Medical Dictionary).

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Post-COVID Challenges for Incoming and Returning International Students

Aliya Pal, Royal Holloway, University of London

Abstract

The article aims to highlight the unique challenges faced by international students who were pursuing education abroad during the COVID-19 pandemic. During this period, the two main obstacles faced by international students were acculturative stress due to lack of access to social support, and economic stress associated with job uncertainty. A literature review and evaluation of past government reports and news articles were used to identify the common challenges faced and to understand the importance of the experiences to inform application-based strategies in order to better support international students. The literature review indicates that developing programmes that allow international students to connect with current students from the same national/cultural background while also encouraging programmes or orientations that discuss issues specific to international students can provide a solid foundation that allows the students to explore their host country confidently. Furthermore, developing a dedicated careers team trained to understand the obstacles that international students face in seeking employment in the host country while also encouraging previous international students to share their insights and journeys can allow for students to initiate networking and also prepare to navigate the job market.

Keywords: COVID-19 affecting international students, COVID-19 pandemic, acculturative stress, economic stress, international student wellbeing, job uncertainty for international students

Post-COVID challenges for incoming and returning international students

The COVID-19 pandemic has significantly altered how we live, work and interact, and there is now much research studying this impact. However, an important yet often overlooked topic is the experiences of university students. Literature has identified university students as being an especially vulnerable population owing to separation from family and consequent individuation, as well as increased personal and academic responsibility upon moving to university. Substantial changes in mode of education, loss of social support and disruption to daily routine, combined with uncertainty about future employment prospects, make university students more vulnerable during the pandemic. Global and cross-cultural research highlights how students' wellbeing was adversely impacted while studying during the pandemic. American and Chinese students reported higher depressive symptoms (Browning *et al.*, 2021), while Greek students also reported increased suicidal ideation and reduced quality of sleep (Kaparounaki *et al.*, 2020). Students with prior mental health issues reported the greatest decline in wellbeing, citing social isolation, increased screen time and reduced physical activity as the main reasons (Browning *et al.*, 2021; Giuntella *et al.*, 2021; Hamza *et al.*, 2021; Misca and Thornton, 2021). For international students, these issues were further exacerbated as enduring travel restrictions and local lockdowns prevented access to familial and social support, as well as economic stress and job uncertainty due to visa restrictions, thus raising their vulnerability (Chen, Li, Wu and Tong, 2020). The article explores how international students were affected during the pandemic and suggests application-based strategies to better support them.

International students experience acculturative stress – stress associated with adjusting to a new environment – which reduces social connectedness and impedes access to social support. Research indicates that reduced social integration is associated with poorer academic performance (Rienties *et al.*, 2012) and increased depressive symptoms (Browning *et al.*, 2021), highlighting the importance of addressing this issue. Studies also indicate that adopting Berry's integration approach – maintaining strong connections with people from the same as well as different cultural backgrounds – results in increased social support satisfaction (Sullivan and Kashubeck-West, 2015). However, the online-only mode of education, lockdown restrictions and further restrictions on students in university accommodation around forming support bubbles prevented opportunities for social interaction in an authentic fashion and thus affected access to social support. While social media has been an obvious alternative, research suggests that increased social media usage was associated with increased reports of loneliness and lower social-seeking behaviour (Lisitsa *et al.*, 2020) as well as increased mental health problems (Gao *et al.*, 2020) during the pandemic. Therefore, it is imperative to recognise the detriment of passive engagement with social media, and to cultivate a method to combat the adverse impact of complete social isolation on mental health and to better support international students.

International students also experienced stressors associated with future employment prospects, increasing economic stress. Research indicates that economic stress and worries about employment prospects affect academic performance (Moore *et al.*, 2021) as well as psychological wellbeing (Dodd *et al.*, 2021; Godinic *et al.*, 2020; Li *et al.*, 2021), with international students being more sensitive to economic downturn (Guo *et al.*, 2019). As the pandemic led to decreased job openings, and visa restrictions further limited these opportunities, international students were left navigating an unfamiliar terrain, despite possessing high cultural sensitivity, good academic performance and international experience valued by organisations, leaving them vulnerable to financial insecurity (Threadgold *et al.*, 2020). Reports indicate that only about a quarter of international students tend to secure graduate opportunities in the UK, with only 5639 students granted a Tier 2/Skilled Worker Visa in 2014 (according to the UK Council for International Student Affairs (UKCISA)). This gap exists primarily due to insufficient and/or inappropriate career guidance and support offered to international students, who bring specific problems such as visa sponsorship issues, and not having the value of unpaid and/or untraditional work experience in their host country recognised (Huang and Turner, 2018). Understanding the purpose/goals and expectations of international students, while simultaneously tailoring a support service that prepares them for job hunting in their host country – for both part-time and full-time opportunities – can help reduce the stress associated with securing a job.

Acculturative stress and career prospects appear to be linked, and they affect students' wellbeing and academic performance. Reynolds and Constantine's (2007) research found that higher acculturative stress was associated with lower career outcome expectations and aspirations, highlighting the need to address both these issues and how their interaction affects international students.

A possible strategy to combat the consequences of acculturative stress includes designing a scheme that allows new university students to connect with currently enrolled students from the same academic department or belonging to the same country and/or culture. For example, Royal Holloway's Peer Guidance scheme connects new university students with current students enrolled within the same academic department for ease of transition. In addition to this, organising an interactive orientation session run by international students to address common obstacles that they face and to share essential coping skills can offer insight and allow international students a strong foundation through which they can explore their new environment with confidence.

Secondly, providing a career team dedicated solely to support international students can diminish economic stress and stress associated with seeking employment. The University of Missouri brought this idea into fruition by creating The Career Center for international students. Its services are designed to cover visa and working permit issues, build resumés specific to that of the host country's expectations, share advertisements for part-time, graduate and summer work placements, provide one-to-one sessions to understand the students' goals and expectations and create a plan to meet those goals (Furnham *et al.*, 2006). This allowed international students to make well-informed decisions for themselves, which led to an increase in obtaining graduate jobs as well as satisfaction with the support available.

Finally, inviting former students to share their journeys and allowing an opportunity to network will allow international students to learn from them, gain insight into different career opportunities and network with people with a similar background.

Adopting these schemes simultaneously would allow international students to thrive in their host country and thus feel better supported.

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Glossary

Acculturative stress: The stressors associated with relocating to a country as an immigrant or an ethnic minority.

Economic stress: The stressors associated with the current state of one's personal finances and/or (due to) fear about the economy.

Berry's integration approach: The act of maintaining strong connections with people from the heritage culture as well as with people from the receiving culture.

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Isabel Wilkerson (2020), *Caste: The Origins of Our Discontents*

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Caste: The Origins of Our Discontents, the second book from Pulitzer Prize winner Isabel Wilkerson, is a seminal work on the boundaries of power that surround and segregate us. Isabel Wilkerson spares no effort to show the reader how these lines transcend class, national boundaries and even generations. Like the bars of an invisible but all-encompassing prison, we are at the mercy of caste: even those of us who benefit from it.

The author sets out to first establish a simple social order: Caste is the domination of a superior caste of people over a group of people considered inferior. Through the system, she mentions a variety of hierarchies: the order of blood purity in Latin America, the Jāti Varna system in ancient India or even the quasi-hierarchy of white immigrants in a post-civil war America. In every case, caste is this bodyless-yet-present-in-every-body force: like the needle of a compass points north, societies return to this hierarchy. The uniqueness of Wilkerson's argument lies in her rejection of societal segregation by biology, wealth, genetics or history. Caste exists as a structural goliath, a ghoul so perverted that no one is spared. One does not need to be openly prejudiced to be casteist – even the assumption that you hold most agency in a room may reflect caste.

The highlight of *Caste* is the vast research accompanied by master storytelling. A gruesome picture of structural dehumanisation is painted as one progresses through the text. The reader notices a certain ridiculousness in the enforcement of a caste system within America. While the Japanese with their whiter-than-white skin were not considered racially white, Indians, from the land that birthed Aryan people, were not considered Aryan. Caste systems have the unique power of turning the subjugated against their own caste, as caste becomes their defining identity and they struggle to define themselves outside their shackles (Kanye West with a 'White Lives Matter' T-shirt, anyone?) Wilkerson's work exposes the reader to the fallacy of a meritocracy, or the opposite: that those on the lower rungs deserve to be where they are.

Through the small stories, urban legends, personal anecdotes and news snippets, the author creates a gripping narrative to make the case for recognising caste. As you complete the book, you are reminded that just because discrimination is forbidden on paper, it does not cease to exist in real life. For example, Wilkerson cites the infamous example of Black women and their instrumental role in the progress made to improve the fields of gynaecology, pain relief and surgery. These brave women were forced to endure days of excruciating pain before they were sent back to toil under the sun or simply died through the tyranny. Black men who were made scapegoats to trial medication and punishment were denied pain relief on the grounds that they 'felt lesser pain'. Today, even after nearly 300 years, hardly any studies on how diseases show up in the African American population exist. African American women are still less likely to be treated when they complain of serious illnesses. Despite being the backbone of modern medicine, theirs is a community that is still denied proper healthcare. But it does not end there: through drug and disease epidemics, inflations and recessions, wars and crises, the dominated remain expendable, offered at the mercy of the superior caste (p. 147). It begs the question where and when do the consequences end? And how do we make reparations?

America remains the focal point of *Caste* – what was, what is and what will be is presented in extensive detail. Time and again, Wilkerson draws our attention to figures revered by us – presidents, prime ministers, members of Senate and Congress, actors – and shows us just how white-washed history is. Why is Hitler villainised, she asks, while Andrew Jackson is commemorated on the $20 bill despite enslaving innocent Black people and killing countless Native Americans on the Trail of Tears? Even before there was nationality and democracy, there was subjugation. While Nazi Germany was cognizant of the horror inflicted on its Jewish residents and sought to hide it, America put its cruelty on display with pride. You read on in horror as Wilkerson recounts the meeting that decided the final solution in Germany – inspired by the savagery in America, the Nazis sought to recreate some of those practices. But even most Nazis agreed on one point – the Americans had gone too far (p. 153).

Wilkerson argues that modern-day Germany is a stellar example of a caste system successfully destroyed, and for good reason: it took a revolution the size of a world war to end the tyranny of caste. She reminds the reader that caste hierarchies still fester within societies – India being a prime example of affirmative action against caste that prompted a lot of conversation yet improved very little. It is unfortunate that she dips only periodically into the socio-history of Nazi Germany and India, examining and comparing their caste systems. Caste manifests its ugly head in every society in the world – even in Africa. I would have appreciated a deeper dive into the histories of some other covert (and overt) caste systems for greater understanding of the concept.

In hindsight, the most impactful part of the book remains its introductory chapter. It recounts US politics in recent years up to the publication of the book; indeed, its datedness may confuse the reader and prompt them to confirm if they have picked up the right book. However, while contexts change, structures do not. Hierarchies have a way of returning to their default setting as history often repeats itself. In the aftermath of the 6 January Capitol uprising, countless racially motivated shootings and public outcry after the Black Lives Matter movement, we are once again at a point in history where we have come face-to-face with caste again. Even if you are not American, it forces you to question your pre-existing notions of subordinate castes from not only around you, but of all such cultures where the narrative is shaped by the dominant caste. *Caste* is instrumental in helping us understand the patterns that repeat themselves in society.

Caste is by no means an easy book to read or digest. Although written by Wilkerson in simple language with precise arguments, the book succeeds in making the reader deeply uncomfortable – as they perhaps should be. She drives her point home repeatedly, to the point where the reader may often start to feel fatigued. The book does serve its purpose perfectly – it forces you to confront reality. It does so with no false pretences: just because the dominant caste committed unspeakable acts against the submissive caste does not mean they should be forgotten about. Read *Caste* if you want to challenge yourself and everything you may take for granted. You may find yourself looking at the world differently.

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