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Pybus, Katie [orcid.org/0000-0002-9990-125X](https://orcid.org/0000-0002-9990-125X), Power, Madeleine [orcid.org/0000-0002-9571-1782](https://orcid.org/0000-0002-9571-1782), Pickett, Kate [orcid.org/0000-0002-8066-8507](https://orcid.org/0000-0002-8066-8507) et al. (1 more author) (2022) *Income inequality, status consumption and status anxiety::An exploratory review of implications for sustainability and directions for future research*. *Social Sciences & Humanities Open*. 100353. ISSN 2590-2911

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## Review Article

## Income inequality, status consumption and status anxiety: An exploratory review of implications for sustainability and directions for future research

Katie Pybus<sup>\*</sup>, Madeleine Power, Kate E. Pickett, Richard Wilkinson

Department of Health Sciences, University of York, Heslington, YO10 5DD, England, United Kingdom

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## ABSTRACT

Income inequality has been associated with higher levels of status consumption with well-established harmful effects on health, wellbeing and economic stability. Research has suggested that status anxiety may be the mechanism that connects income inequality with status consumption, but the literature is disparate. In this interdisciplinary review, we draw together the evidence and explore the implications for climate change and sustainability, identifying that status anxiety may be a key driver of the higher levels of consumption in more unequal contexts. We find that status-anxiety fuelled consumption is associated with household debt, spatial inequalities, cycles of unsustainable consumption and longer commuting times, ultimately contributing to higher carbon emissions. We propose that further research should include more in-depth study and cohesive measurement of status anxiety and seek to better understand how to reduce unsustainable patterns of status-anxiety driven consumption. Reducing income inequality could have both short and long-term positive global environmental impacts.

## 1. Introduction

It is now well-established that income inequality is linked to multiple social, psychological, and economic indices of reduced well-being in societies, and there is a large and growing body of evidence suggesting that social rank and the associated psychological and physiological effects of status hierarchies are implicated in this relationship (Kasser, 2002; Wilkinson & Pickett, 2018; Wilkinson & Pickett, 2010). There is now substantial evidence that status consumption, defined as ‘the motivational process by which individuals strive to improve their social standing through the conspicuous consumption of consumer products that confer and symbolize status both for the individual and surrounding significant others’ (Eastman et al., 1999; p42) increases under conditions of greater income inequality. Emerging evidence suggests that status anxiety may be the mechanism that connects the two. Community life atrophies in more unequal societies, and status anxieties increase across all income groups (Layte & Whelan, 2014). As a result, we worry more about the impression we create in the minds of others, and consumerism thrives as we try to communicate our self-worth using status symbols.

People in more unequal societies therefore spend more on status goods (Walasek and Brown, 2015), work longer hours, and are more likely to get into debt (Frank, 2007). The impact of income inequality on

increased consumption not only has implications for wellbeing – with quality of life lower in more unequal societies – but also for sustainability. Though far from universally accepted, the evidence for the consequences of high carbon emissions is scientifically incontrovertible. In May 2013, rising carbon concentrations in the atmosphere surpassed 400 ppm–40 per cent higher than before industrialisation, and higher than humans have ever breathed before. In 2007, it was estimated that if we are to keep the rise in global temperatures to no more than 2 °C, atmospheric concentrations of carbon will have to be reduced to 350 ppm (Hansen et al., 2013). Affluence is recognised as one of the strongest predictors of higher carbon footprints and greenhouse gas emissions through higher levels of travel, larger and multiple houses, alongside greater food waste and consumption more broadly (Gibson et al., 2011). Consumption – and especially conspicuous consumption – underpins higher ecological carbon emissions, disrupting the normal regeneration and reproduction of ecosystems (Lynch, 2019). In this context, the need to understand the underlying mechanisms behind patterns of consumption and to identify more sustainable future solutions has taken on a new urgency.

Despite the profoundly negative consequences of both income inequality and status consumption, the literature on the key drivers underpinning the relationship between the two remains disparate,

<sup>\*</sup> Corresponding author.

E-mail address: [katie.pybus@york.ac.uk](mailto:katie.pybus@york.ac.uk) (K. Pybus).

therefore lacking the clarity and robust evidence base necessary for effective advocacy. In this exploratory review, we assess whether status anxiety is a plausible mechanism connecting the two. We review seventy-six conceptual and empirical books and articles to understand the relationship between income inequality, status consumption and status anxiety. We aim to draw out the economic and sustainability implications, and provide a starting point for further discussion, debate and research.

We find evidence to suggest that social rank and the associated psychological and physiological effects of status hierarchies are implicated in patterns of status consumption. The heightened emphasis on social rank present in more unequal settings means that income inequality is central to increased consumption patterns with a range of harmful consequences for individual finances and the environment. Whilst much of this evidence originates in North America, parallels exist across Europe and Asia, impacting on both low- and high-income countries. We end by identifying gaps in the current literature and setting out an agenda for future research.

## 2. Methods

Preliminary scoping searches of the literature suggested that research relating to income inequality, status consumption and status anxiety crossed multiple disciplines including sociology, psychology, economics, and health. It was therefore anticipated that the evidence base would be broad and heterogenous, and that a narrative approach would offer greater flexibility in drawing together these findings (Millat et al., 2015). A further key benefit of narrative reviews is the ability to incorporate higher level conceptual and theoretical frameworks into the synthesis alongside empirical work (Baumeister and Leary, 1997; Green et al., 2006).

There were two key aims to this review. We sought to a) establish the nature and scope of the literature on the relationship between income inequality and status consumption, and b) consider possible mechanisms between income inequality and status consumption by describing the literature on the relationship between income inequality, status consumption and status anxiety. In addition to considering the substantive evidence, we aimed to consider the methodological scope of the current evidence base, i.e., the ‘state’ of the literature and to draw out implications for climate change and sustainability.

### 2.1. Search strategy

Searches were conducted by MP and KP between May 2019–August 2021 and literature was extracted from the following databases: PsychInfo, Social Sciences Citation Index, PubMed Central and Scopus. The inclusion criteria were a) the article included a measure of income inequality, b) the article included a measure of status consumption or status anxiety (or both), c) that the article contained either theoretical or empirical development of these concepts, d) the article was published in the English language. The following search terms were used: “status consumption”; “conspicuous consumption”; “income inequality”; “income distribution”; “status anxiety”.

In addition, hand searching using reference lists and Google Scholar was undertaken, and further literature sources were identified by KEP and RW, who are experts in the field of income inequality. No time parameters were set to enable the inclusion of key conceptual literature that has informed the current evidence base, for example, Veblen (1992). Searches identified 119 articles and books which were screened by KP and MP and those that did not meet the inclusion criteria were excluded by consensus. A total of 76 articles and books were included in the final review.

## 3. Findings

### 3.1. Signalling status

Status consumption is a means of visibly demonstrating social rank that relies on the shared social meanings attached to particular goods (Slater, 1997). Conspicuous forms of consumption enable displays of wealth because they signal to others the availability of disposable income. Veblen (1925: 1992) suggests that the power of consumption in signalling status is intrinsically linked to waste, by demonstrating an ability to purchase excess material goods (wasting financial resources) and in being able to ‘waste’ time through engaging in visible leisure activities rather than being in paid employment. Historically, the smaller size of communities meant visibly engaging in leisure activities was enough to signal wealth to others who were often known to the person and lived close by, whereas modern, industrialised societies require a different approach. Larger and comparatively anonymous populations mean that visible status goods are a more effective way of demonstrating wealth to others in this context (Veblen, 1925: 1992). As such, purchases of luxury goods have risen considerably over time (evident through so-called ‘Veblen effects’ whereby demand for goods increases with their price, even when lower-priced substitutes are available) and levels of this form of conspicuous consumption are now higher in US cities than in smaller residential areas (Currid-Halkett et al., 2019; Goenka & Thomas, 2020).

Conspicuous status symbols represent shared social signals of wealth but the success of demonstrating wealth to others through material goods relies on evaluative judgements about relative social status (Corrigan, 1997; Frank, 1999), therefore social context matters. According to the social rank hypothesis, how much attention individuals dedicate to their income-related social status relates to the overall income dispersion in a society (Brown et al. 2014; Daly et al., 2015; Walasek & Brown, 2015a). When larger income gaps separate the poorest and the wealthiest, income becomes a more accurate indicator of one’s status or social rank (Walasek et al., 2018). Consequently, to increase their rank position in the income distribution, people rationally devote more effort towards status competition and consumption when they live in more unequal societies.

The role of income inequality in status consumption has more recently been highlighted via cross-national research studying internet search terms - Walasek and Brown (2015b) find higher numbers of internet searches relating to designer brands and positional goods in more unequal countries. In addition, people are more likely express their support for high status brands using social media (Twitter) and to do so more emphatically in the presence of greater income inequality (Walasek et al., 2018). The display of excess goods is not, however, the full picture - the nature of the goods themselves also matter for social rank. Over time, the wider availability of traditional status symbols such as cars and jewellery has - to some extent - led to a reimagining of the way status is expressed through consumption (Currid-Halkett, 2017; Mason, 1998). When goods are available to all, it is more difficult to separate people according to status and so the social value of the product becomes diminished (Ritzer, 2001), necessitating more nuanced forms of consumption. As a result, focus has shifted to specific labels and brands as a more modern form of social distinction (Mason, 1998).

These nuanced practices of consumption, which centre around ‘taste’ rather than purely financial displays of status, serve to legitimise the consumption undertaken by those of higher social status (Bourdieu, 1984). The rarer the goods, the more they provide opportunities for those of higher social status to separate themselves from those in lower socioeconomic groups (Corrigan, 1997) and new higher status consumers are likely to shun certain labels and logos as culturally low-brow, in favour of a ‘knowingness’ and ‘discernment’ around subtle forms of consumption that signify cultural capital to others in the same social group (Savage et al., 2015). This is best demonstrated by the rise in consumption of inconspicuous status goods in more recent years -

widespread global austerity means that overt displays of wealth are now less socially acceptable and so visible labels and logos are shunned in favour of more subtle brands that signal status to those of similar social rank (Eckhardt et al., 2015). Identity is also important, people who hold a preference for social hierarchies and following group norms are more likely find the purchasing and display of luxury goods socially acceptable, particularly in more socially visible contexts and socially competitive (compared to co-operative) environments (Goenka & Thomas, 2020; Ordabayeva & Chandon, 2011). Income inequality too is associated with greater spending on advertising as a percentage of GDP, potentially because lower consumption in more equal societies means this is less beneficial for companies (Wilkinson & Pickett, 2018).

The cultural capital afforded by 'taste' is associated with social and economic capital, so that whilst those in lower socioeconomic groups are free to consume alternative perceived status goods, they will not allow access to the same privileges (Bourdieu, 1984; Delhey & Steckermeier, 2019) and may be viewed as contemptible by those with higher social status (Savage et al., 2015). This means that poverty is associated not only with a lack of access to material goods, but also exclusion from social meanings and power (Slater, 1997), particularly in societal contexts that place greater emphasis on social rank such as those characterised by greater income inequality.

Whether conspicuous or inconspicuous, the devaluing of status goods at the point that they become widely accessible leads to a cycle of consumerism as people try to keep up with the latest trends with all the attendant implications for global warming. Not only might societies with higher levels of status consumption generate more economic and environmental waste, they are also more divided because consumption practices by their nature exclude those members of society who cannot afford to keep up (Fiorito & Vatiery, 2018). Status consumption practices themselves become socially stratifying by generating greater household debt and diverting resources away from social goods, so that maintaining consumption standards become social habit (Dwyer, 2009), promoting cycles of inequality.

### 3.2. Cycles of inequality

The pervasive effects of income inequality on consumption extend beyond status goods and into the everyday lives and futures of those living in unequal societies. Even day-to-day consumption on items such as food, housing and leisure activities are increased with higher levels of income inequality (Charles & Lundy, 2013), further contributing to the financial burden on households. Underlying drivers of social status are also affected. Education has longer term benefits for maintaining or improving social status (Currid-Halkett et al., 2019) and may explain why spending on private schooling increases in some unequal contexts (Matos, 2007). In addition, Greenwood and Holt (2010) posit that rising top incomes over time have led to less political will for taxation and spending on public welfare programmes, in turn leading to underfunding in education and public spaces. Lower funding in education and public spaces creates competition for more 'desirable' neighbourhoods, providing less incentive for developers to build moderately priced housing as competition for higher priced properties increases. Inequalities become entrenched as families are pushed into debt due to associated rises in living costs and are unable to access the educational resources required for social mobility.

Income inequality becomes self-perpetuating, since in societies where social rank is more important, it becomes increasingly beneficial for those with financial resources to separate themselves from wider society through exclusive schools and neighbourhoods. This is evident in the USA, where consumption inequalities in education and healthcare are increasing over time (Lee & Painter, 2016), and social divisions are increasingly visible. As top incomes rise and economic elites isolate themselves in gated communities, exclusive clubs and private schools, there are political consequences as power becomes concentrated amongst high income individuals who may then support measures to

increase their own income and wealth. In turn, this leads to a weakened social safety net, economic deregulation and an erosion of endorsement of public services that support lower income households and contribute to greater equality (Wisman, 2013).

In the following section we will discuss how status anxiety acts as a driver for status consumption, exacerbated by income inequality, before moving to consider the consequences for two key areas of spending: household finances and housing.

### 3.3. Status anxiety is more salient in unequal settings

The social rank hypothesis suggests that societal well-being suffers when people put social status ahead of other important aspects of their lives, such as their family, traditions, or maintenance of other supportive and health-protective relationships. As such, status competition (or status anxiety; Layte & Whelan, 2014) is identified as an important cause of poor health in a society (Adler et al., 2000; Präg et al., 2016; Wilkinson & Pickett, 2018). In more unequal settings, the amplification of status hierarchies means that lower status becomes associated with perceptions of inferiority, leading to a range of negative psychosocial responses such as increased stress and reduced social capital (Pickett and Wilkinson, 2015a, Pickett and Wilkinson, 2015b; Layte, 2012). Perceived income inequality is associated with a perception of higher status competition at the societal level, and this in turn impacts on individual feelings of status anxiety (Melita et al., 2021). Status competition therefore affects all members of unequal societies (Adjaye-Gbewonyo & Kawachi, 2012) as people seek to display as high social status as possible and income inequality worsens mental and physical health for everyone (Wilkinson and Pickett, 2010, 2018). Recent data on over 18,000 individuals in European countries, for example, confirms links between income inequality and physiological markers of inflammation that are associated with chronic stress, with those in lower socioeconomic positions being worst affected (Layte et al., 2019).

A diverse range of measures are used to capture experiences of status anxiety, these include perceptions of inferiority and social evaluative threat, and physiological responses to social hierarchies (Layte, 2012; Wilkinson & Pickett, 2017), all of which are exacerbated by income inequality. Each of these measures highlight the role of subjective social comparisons in generating status anxiety. Using the statement 'some people look down on me because of my job situation or income' in the European Quality of Life Survey, for example, Layte and Whelan (2014) find that status anxiety at all points on the income distribution is higher in more unequal countries with stronger impacts on those at the lower end of the income distribution. Income inequality additionally lowers people's perceptions of their own social status with negative consequences for wellbeing (Schneider, 2019), meaning that dissatisfaction occurs across the income spectrum in more unequal settings as people constantly strive to improve their social standing.

Paskov et al. (2013) have developed a comprehensive measure of status anxiety designed to reflect the extent to which a person engages in 'status seeking', which includes concerns about relative social position, awareness of social hierarchies and an assessment of how much the person relies on the opinions of other people. Studying data from the European Social Survey, they find a clear association between income inequality and status seeking, so that all individuals in unequal societies seek more status and express higher concerns about how they are viewed by others. Lower income respondents were more strongly affected, perhaps reflecting the more limited resources available to these individuals to improve social position. Income inequality therefore creates a context in which status and power are salient, all members worry about their social rank and social relationships are viewed as competitive rather than collaborative (Rodriguez-Bailon et al., 2020), resulting in heightened status anxiety and lowered social trust (Layte, 2011; Delhey & Dragolov, 2014).

### 3.4. Status anxiety as a link between income inequality and status consumption

Consumption practices can act to ameliorate the harmful effects of status anxiety by enabling individuals to signal their status to others and so counteract low self-esteem, social evaluative threat and feelings of inferiority. Extensive biological and neurological evidence suggests that higher social status may bring physiological rewards and in turn, so does status consumption (Wilkinson & Pickett, 2018). When individuals are primed to think about social competition, the purchasing of status goods increases (Ordabayeva & Chandon, 2011), suggesting that status concerns are central to consumption practices. More recent experimental research has confirmed that status seeking may be considered a mediating influence in the relationship between economic inequality and forms of status and conspicuous consumption (Velandia-Morales et al., 2022).

Individuals who feel disempowered are more prone to overspending and debt because the purchasing of expensive, status signalling goods is perceived as providing higher social status and therefore power (Rucker & Galinsky, 2008). These effects are particularly acute for people with lower socioeconomic status, who may not have financial resources readily available to fund this consumption. Briggs (2013), for example, demonstrates how low-income tourists holidaying in Ibiza use excessive spending to counteract low pay, economic uncertainty and powerlessness through hyper-consumption designed to give the impression of high status. More recently, Du et al. (2021) found similar effects among Chinese college students with lower subjective social status – perceived income inequality in this context led to the increased pursuit of positional goods. Both females and males attempt to enhance their physical appearance to improve their status in response to status anxiety associated with more unequal environments (Blake & Brooks, 2019) and using a measure of financial scarcity, Sommet et al. (2018) find that those in lower socioeconomic positions in more unequal societies report higher levels of unhappiness than those higher up the income scale.

Status anxiety appears to be lower amongst those who own their home and have higher occupation or education status (Delhey & Steckermeier, 2019) but levels of job satisfaction are reduced across all income groups in more unequal settings, perhaps relating to concerns about meeting societal expectations for success (Keshabyan & Day, 2020), which may be less achievable when there are larger gaps between rich and poor and status concerns are heightened across the income spectrum. Income inequality in the workplace can itself impact on levels of status consumption, particularly affecting individuals with a lower job rank in their place of work (Muggleton et al., 2022). In fact, some evidence suggests that socioeconomic disadvantage can sometimes lead to less status-seeking because in very unequal settings higher status can seem out of reach – ‘giving up’, rather than ‘keeping up’ with the Joneses (Paskov et al., 2017).

Financial dissatisfaction more broadly has increased for all households over time, but middle-income households are also particularly affected by income inequality because these individuals are likely to face the largest gap between aspirations and economic reality (Hastings, 2019). Schor (1997) terms this the ‘aspiration gap’ and notes that the amount of income required to achieve a desired lifestyle increased considerably during the 1980s and 1990s, with the level of income required to meet aspirations doubling during this time. Balıkcı and Koylan (2020), for example, find during a series of in-depth interviews with residents of an upmarket Istanbul street undergoing urban renewal that much of the demand for new homes was derived from a desire to demonstrate wealth to neighbours rather than having any functional basis (in fact, residents frequently complained that the new buildings were worse in multiple functional ways). Individuals who care more about how they are perceived by others are more likely to engage in consumption practices that are associated with higher carbon consumption behaviours through, for example, transport and the purchasing of high-status goods (Mi et al., 2018).

Consumption patterns have changed over time, becoming more complex and taking on more subtle and nuanced forms, but their impact on household finances, the broader economy and the environment are no less diminished, and they remain driven by the type of status concerns that are more salient in unequal societies. Consumption practices fuelled by income inequality have led to a range of wide-reaching and negative consequences.

### 3.5. Economic and social consequences of status-anxiety driven consumption

#### 3.5.1. Rising household debt

In the USA, average household debt rose from 66% to 113% of disposable household income between 1981 and 2003 and during this time consumption inequalities (i.e., whether lower income households consume at the same rate as higher income households) rose less than income inequality, suggesting a higher flow of credit to lower income households who were able to maintain consumption practices using debt (Iacoviello, 2008). Evidence suggests that social comparisons play a role in the use of credit. In the USA between 1999 and 2009, household leverage increased particularly sharply for individuals whose relative income was lower compared to others in their state (Carr & Jayadev, 2015) and in states with higher top incomes, lower income households devoted more of their household budget to visible goods and services (Bertrand & Morse, 2016). Income inequality at the US county level is associated with an increase in demand for high status cars, suggesting signalling motives as expressed through visible status goods are stronger in more unequal areas (Bricker et al., 2021).

The links between income inequality, consumption and debt carry a range of negative financial consequences. Frank et al. (2014) find at the USA county level that between 1990 and 2000, rising income inequality was associated with a 33% increase in bankruptcy filings, whilst lower income households in more unequal contexts self-report higher levels of deteriorating personal financial circumstances (Bertrand & Morse, 2016). Savings are also affected, meaning that households may have less of a buffer to meet unexpected costs or to weather larger financial shocks such as unemployment. Using over two decades of data from the USA and OECD countries, Alvarez-Cuadrado and Vilalta (2018) found greater inequalities in savings rates between lower and higher income households in more unequal settings but whilst lower income households were worst affected, all households saved less in the presence of greater income inequality.

This evidence demonstrates that the harmful financial consequences of income inequality and associated consumption practices extend beyond lower income households. In more unequal settings, overall spending is increased for people of all income levels across a range of household goods including housing and groceries (Charles & Lundy, 2013). These additional costs arise because income inequality raises the standards of what is considered an average lifestyle. Lower income households spend more on visible forms of consumption such as clothing and entertainment, reflecting a greater need to conform to these raised standards of ‘normal’ (Charles & Lundy, 2013). Evidence from rural China corroborates that of North America and Europe, Sun and Wang (2013) find a relationship between relative income position and household consumption particularly relating to expenditures on housing, education, clothing and eating out. Villages with higher income inequality had higher levels of household consumption.

Rising personal debt and falling household savings since the 1980s have had longstanding economic consequences, one of which was the 2007 recession (Bazillier & Hericourt, 2017; Rajan, 2010; Van Treeck, 2014; Wisman, 2013). In Portugal, Matos (2019) finds between 2000 and 2007 that despite slowing economic growth, households increased their spending on mortgages, upmarket cars and private schools, leaving a spending gap that was filled by higher household debt, particularly amongst middle-income households who strived to emulate the spending of those above. Using data from the 2004–2005 India Human

Development Survey, Jaikumar and Sarin (2015) find that income inequality in Indian states is associated with higher levels of conspicuous consumption across all status groups, but particularly for those in lower income groups and rural households. The authors suggest that these groups may be especially susceptible to using visible status goods to convey wealth because of reduced access to other indicators of status, such as education.

More recently, there has been some debate as to whether inequalities in consumption-focused spending have increased, remained unchanged or decreased in line with increasing income inequality (Aguilar & Bils, 2015; Hwang & Lee, 2017; Krueger & Perri, 2006; Lee & Painter, 2016), but the links between income inequality and debt remain clear.

The relationship between household debt and income inequality may also be self-reinforcing. Wood (2020) finds that household debt in the UK contributes to rising inequality by increasing the share of income at the upper end of the distribution, whilst reducing the concentration of income away from the middle. Further to this, household debt provides a revenue stream from indebted households to the financial sector where it is distributed to managers, shareholders and employees at the top of the income scale. In more unequal settings, economic power becomes concentrated at the top and this may be reflected in political power that in turn alters the regulatory structure of lending practices (Holt & Greenwood, 2012). Where there is a strong desire to emulate those higher up in the income scale and lending practices are accommodating, financial instability is more likely (Ryoo & Kim, 2014).

Credit supply, however, does not necessarily provide a full picture of the relationship between income inequality and status consumption. Coibion et al. (2016) find, for example, that lower income households in high inequality areas borrow less than higher income households which the authors suggest may be because banks are less willing to lend to lower income households in these settings. Households may therefore also supplement their income through working practices - higher levels of income inequality are associated with longer working hours (Bowles & Park, 2005; Alexiou & Kartiyasa, 2020).

### 3.5.2. Housing as status consumption

Housing is a particularly useful indicator for those seeking to signal their wealth because it is highly visible and those who do not live in a desirable home or area cannot imitate doing so (Balikci & Koylan, 2020). Rising top incomes in the context of income inequality may therefore fuel increased housing consumption at the top, which in turn inspires debt-financed housing consumption further down the distribution (Thompson, 2018). In addition, where disposable incomes at the top are larger than usual this may bid up the price of land and housing in more affluent neighbourhoods, since those in the highest income bracket have more spare income to dedicate to housing. The inelasticity of housing supply means much more rapid rises in price than other goods when people at the top spend more (Holt & Greenwood, 2012).

Fligstein et al. (2017) studied over four thousand residential moves in the USA and found that in areas with higher income inequality, households experienced higher housing costs and took on more debt. The impact on households with the highest incomes who were able to take on less debt to finance their increased expenses was limited; but financial consequences were much greater further down the income distribution. Those with higher incomes could afford the most desirable neighbourhoods, whilst everyone else paid more for housing in other neighbourhoods. Most households attempted to increase the size of their home when moving, reflecting demographic changes such as an increase in family size but also potentially reflecting aspirations to increase status through larger homes (Fligstein et al., 2017). Frank et al. (2014) find at the US county level that between 1990 and 2000, there was a lengthening of commuting times as households become priced out of more central (and desirable) neighbourhoods.

In addition to the higher costs faced by households attached to housing and desirable neighbourhoods in unequal contexts, evidence suggests that housing may also be used as leverage to increase

borrowing capacity for non-housing related costs. The use of home equity loans may therefore also account for higher housing costs associated with more unequal areas. Using data on household borrowing in the USA between 1953 and 2003, Christen and Morgan (2005) found that the effect of income inequality on household debt has increased over time since the 1980s, particularly in relation to conspicuous forms of consumption (status goods). Home equity loans and financing options, for example, car loans or store cards, were most important in explaining this relationship.

Housing as a form of consumption, driven by status concerns, has led to rising property and land prices and this pattern is exacerbated by income inequality. The social implications go beyond the individual health implications – the stress and anxiety caused by trying to achieve higher social status – and may also perpetuate cycles of inequality through spatial forms of social segregation. Desirable housing is attached to more exclusive neighbourhoods that may also provide other resources such as education and social capital that are not available to those who are priced out. Longer commuting times have further environmental implications.

## 4. Discussion

### 4.1. Summary of findings

Taken together, this evidence suggests that income inequality promotes increased status consumption as people at each income level try to emulate those above and that status anxiety is a potential driver in this relationship. Income inequality raises the standards of what is considered a normal lifestyle, exerting further pressure on households to purchase visible goods. It also creates the conditions that lock people in cycles of consumption, as they try to ameliorate status concerns by purchasing material goods and paying for experiences that signal status to others. Consequences include debt, longer working hours, spatial inequalities, and greater macro-economic instability. The literature suggests that relative income matters more for status consumption than absolute income, reflecting the increased status competition attached to more unequal settings. People across the income spectrum are affected, though greater disempowerment and the need to keep up with perpetual displays of status may be ultimately more harmful to the financial circumstances of lower income households.

Status anxiety has important implications for both individual finances and the broader economy, as well as spatial inequalities, and the environment. It also creates cycles of inequality, as status consumption practices broaden to include not only material goods but access to more exclusive education and housing.

### 4.2. The state of the literature and directions for future research

Through reviewing the current literature, this paper has established links between status anxiety, status consumption and income inequality. The evidence base could be further strengthened, however, by development of an agreed measure of status anxiety with which to carry out more extensive and comparative research. Assessment of the relationship between income inequality, status consumption and status anxiety currently is made more difficult by heterogeneity in the measurement of status anxiety and the relatively low number of experimental studies compared to those using pre-existing survey data (Buttrick & Oishi, 2017). Using an experimental design based on the Bimboola Paradigm, Velandia-Morales et al. (2022) did not find a statistically significant relationship between income inequality, status anxiety and status consumption, but highlight the importance of social context in experimental designs such as this. If participants are not aware of what constitutes a status good in such hypothetical scenarios, it may be more difficult to elicit accurate responses to status anxiety questions (Velandia-Morales et al., 2022). Similarly, greater consistency in relation to agreed measures of income inequality itself, particularly how this is perceived by

those participating in research on this topic, would be beneficial (see Jachimowicz et al., 2020 and Phillips et al., 2020 for a comprehensive discussion).

Furthermore, the evidence base relating to income inequality, status consumption and status anxiety focuses on extensive and robust quantitative analyses, perhaps a reflection of the need to use country or state level analyses when measuring the effects of income inequality, however, this type of analysis offers less opportunity for in depth study of the mechanisms by which each are linked. In a review of current psychological literature, Dubois, Jung, and Ordabayeva (2021) find that drivers of luxury consumption included political belief systems, biological indicators (e.g., testosterone) and whether individuals socially valued uniqueness or assimilation, but this type of research is rare in the evidence base. Qualitative research is lacking in the literature on status consumption, status anxiety and income inequality, and the introduction of this type of evidence may help to develop a fuller understanding of the psychological underpinnings of status concerns. To do so requires data on peoples shared interest in, and attitudes toward positional consumption, in addition to the expenditure-based measures discussed here (Walasek et al., 2018).

Whilst earlier commentators and researchers focused on the role of the media and advertising in promoting status consumption, research has not kept pace by considering (in depth) the role of social media in generating status anxiety and consumption, aside from a few studies (see for example, Walasek & Brown, 2015a; 2015b). The role of social media celebrity advertising campaigns, 'aspirational' Instagram accounts and social media influencers should be considered an area for future research.

Widening of research to focus on settings outside of the USA and Europe is also needed. This may, however, be a limitation of the review itself which only included books and articles written in the English language, for example, we were unable to access the German study: Anxiety and Anger: On the emotional dimensions of social inequality (Rackow et al., 2012) in writing this article.

#### 4.3. Implications for sustainability and climate change

Consumption patterns, including not only material goods but also the rise of the 'experience economy' where globalised tourism and travel becomes a further site to display status, are each leading to higher and unsustainable levels of carbon emissions (Urry, 2010). In the socially competitive, digital world of social media sites such as Instagram, this is unlikely to improve any time soon. Whilst there is often a focus on reducing greenhouse gas emissions in developing nations who are engaged in programmes of industrialisation, this diverts attention away from the unsustainable levels of environmental damage caused by the high levels of consumption in industrialised nations (Shwom & Lorenzen, 2012). Although the sites of production for material goods are often in developing countries, these goods are transported and consumed in high income countries, contributing significantly to greenhouse gas emissions (Shwom & Lorenzen, 2012). Global food systems too are implicated here.

Once people become locked in a pattern of consumption, as the evidence suggests is more likely in unequal settings, the environmental impacts will only worsen over time on the current trajectory. This is in addition to the implications of urban sprawl and suburbanisation discussed earlier in the article, which require greater use of transport for commuting and in the case of suburbanisation, more likely cars than public transport. Survey data collected in the UK during the Covid-19 pandemic suggests that whilst people initially reflected on consumption patterns and environmental concerns during periods of lockdown, access to consumerism via digital platforms and a desire to return to previous consumption patterns, coupled with policy maker encouragement to spend in order to boost the economy, means that there seems ultimately to be limited impetus for change in a post-Covid world (Briggs et al., 2020).

Sexton and Sexton (2014) do find that conspicuous consumption may conversely be harnessed as a force for public good in environmental terms, what they term 'conspicuous conservation'. They suggest that in the context of a recent global history of austerity and rising environmental concerns, status can now be displayed via green credentials. This has led to increased purchasing of lower emission vehicles in some USA states as visible status goods, also known as the 'Prius Halo'. Status competition in this context can potentially have a positive impact on climate change. Ultimately, however, it seems that the most effective way to reduce current unsustainable levels of climate change is to reduce patterns of consumption overall.

## 5. Conclusion

Income inequality has harmful effects on physical and mental well-being for everyone, driven by concerns about status that become more salient in unequal settings. Status competition drives consumption patterns by enabling visible displays of status that aim to ameliorate status anxieties. Alongside these harmful effects on our health, associated consumption patterns cause harm to household finances, promote spatial inequalities and have the potential to have lasting, damaging effects on the environment. There are broader economic implications too, and social impacts where cycles of inequality become entrenched and power becomes concentrated in the hands of those with the greatest financial resources. Addressing income inequality, and therefore associated status anxieties, would have wide-reaching societal benefits, not just now but in creating a more sustainable global future.

### Author contributions

KP and MP designed and carried out the review, KEP and RW contributed conceptualisation, analysis and supervision to the review. All authors were involved in the writing and editing process.

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### Data availability

All books and articles associated with the review are available in the Appendix and reference list associated with this article.

### Declaration of competing interest

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

### References

- Adjaye-Gbewonyo, K., & Kawachi, I. (2012). Use of the yitzhaki Index as a test of relative deprivation for health outcomes: A review of recent literature. *Social Science & Medicine*, 75(1), 129–137.
- Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning. *Health Psychology*, 19(6), 586–592.
- Aguiar, M., & Bils, M. (2015). Has consumption inequality mirrored income inequality? *The American Economic Review*, 105(9), 2725–2756.

- Alexiou, C., & Kartiyasa, A. (2020). Does greater income inequality cause increased work hours? New evidence from high income economies. *Bulletin of Economic Research*, 72(4), 380–392.
- Alvarez-Cuadrado, F., & Vilalta, M. E. (2018). Income inequality and saving. *Oxford Bulletin of Economics & Statistics*, 80(6), 1029–1061.
- Balikci, E., & Koylan, D. (2020). Perceiving urban transformation from the perspective of evolutionary economics: Renewal of houses in bagdat street, Istanbul. *Journal of Economic Issues*, 54(1), 164–182.
- Bazillier, R., & Hericourt, J. (2017). The circular relationship between inequality, leverage, and financial crises. *Journal of Economic Surveys*, 31(2), 463–496.
- Bertrand, M., & Morse, A. (2016). Trickle-down consumption. *The Review of Economics and Statistics*, 98(5), 863–879.
- Blake, K. R., & Brooks, R. C. (2019). Status anxiety mediates the positive relationship between income inequality and sexualization. *Proceedings of the National Academy of Sciences*, 116(50), 25029–25033.
- Bourdieu, P. (1984). *Distinction: A social critique of the judgement of taste*. London: Routledge & Kegan Paul.
- Bowles, S., & Park, Y. (2005). Emulation, inequality, and work hours: Was Thorsten Veblen right? *The Economic Journal*, 115(507), F397–F412.
- Bricker, J., Krimmel, J., & Ramcharan, R. (2021). Signaling status: The impact of relative income on household consumption and financial decisions. *Management Science*, 67(4), 1993–2009.
- Briggs, D. (2013). *Deviance and risk on holiday*. London: Palgrave Macmillan.
- Buttrick, N. R., & Oishi, S. (2017). The psychological consequences of income inequality. *Social and Personality Psychology Compass*, 11(3), Article E12304.
- Carr, M. D., & Jayadev, A. (2015). Relative income and indebtedness: Evidence from panel data. *Review of Income and Wealth*, 61(4), 759–772.
- Charles, M., & Lundy, J. D. (2013). The local Joneses: Household consumption and income inequality in large metropolitan areas. *Research in Social Stratification and Mobility*, 34, 14–29.
- Christen, M., & Morgan, R. M. (2005). Keeping up with the Joneses: Analyzing the effect of income inequality on consumer borrowing. *Quantitative Marketing and Economics*, 3(2), 145–173.
- Coibion, O., Gorodnichenko, Y., Kudryak, M., & Mondragon, J. (2016). *Does greater inequality lead to more household borrowing? New evidence from household data*. University of California eScholarship.
- Corrigan, P. (1997). *The sociology of consumption: An introduction*. London; Thousand Oaks, Calif: Sage Publications.
- Currid-Halkett, E. (2017). *The sum of small things: Culture and consumption in the 21<sup>st</sup> Century*. Princeton, NJ: Princeton University Press.
- Currid-Halkett, E., Lee, H., & Painter, G. D. (2019). Veblen goods and urban distinction: The economic geography of conspicuous consumption. *Journal of Regional Science*, 59(1), 83–117.
- Daly, M., Boyce, C., & Wood, A. (2015). A social rank explanation of how money influences health. *Health Psychology*, 34(3), 222–230.
- Delhey, J., & Dragolov, G. (2014). Why inequality makes Europeans less happy: The role of distrust, status anxiety, and perceived conflict. *European Sociological Review*, 30(2), 151–165.
- Delhey, J., & Steckermeier, L. C. (2019). Social ills in rich countries: New evidence on levels, causes, and mediators. *Social Indicators Research*, 149(1), 87–125.
- Dubois, D., Jung, S. J., & Ordabayeva, N. (2021). The psychology of luxury consumption. *Current Opinion in Psychology*, 39, 82–87.
- Du, H., Chen, A., Li, Y., Ma, L., Xing, Q., & Nie, Y. (2021). Perceived income inequality increases status seeking among low social class individuals. *Asian Journal of Social Psychology*, April 2020. <https://doi.org/10.1111/ajsp.12455>
- Dwyer, R. E. (2009). Making a habit of it: Positional consumption, conventional action and the standard of living. *Journal of Consumer Culture*, 9(3), 328–347.
- Eastman, J. K., Goldsmith, R. E., & Flynn, L. R. (1999). Status consumption in consumer behavior: Scale development and validation. *Journal of Marketing Theory and Practice*, 7(3), pp41–52.
- Eckhardt, G. M., Belk, R. W., & Wilson, J. A. J. (2015). The rise of inconspicuous consumption. *Journal of Marketing Management*, 31(7–8), 807–826.
- Fiorito, L., & Vatierno, M. (2018). Positional goods and social welfare: A note on george pendleton watkins' neglected contribution. *The European Journal of the History of Economic Thought*, 25(3), 460–472.
- Fligstein, N., Hastings, O. P., & Goldstein, A. (2017). *Keeping up with the Joneses: How households fared in the era of high income inequality and the housing price bubble, 1999–2007*. *Socius: Sociological Research for a dynamic world*: 237802311772233.
- Frank, R. (1999). *Luxury fever: Weighing the cost of excess*. Princeton and Oxford: Princeton University Press.
- Frank, R., Levine, A., & Dijk, O. (2014). Expenditure cascades. *Review of Behavioral Economics*, 1, 55–73.
- Gibson, C., Head, L., Gill, N., & Waitt, G. (2011). Climate change and household dynamics: Beyond consumption, unbending sustainability. *Transactions of the Institute of British Geographers*, 36(1), 3–8.
- Goenka, S., & Thomas, M. (2020). The malleable morality of conspicuous consumption. *Journal of Personality and Social Psychology*, 118(3), 562–583.
- Greenwood, D. T., & Holt, R. P. F. (2010). Growth, inequality and negative trickle down. *Journal of Economic Issues*, 44(2), 403–410.
- Hansen, J., Kharecha, P., Sato, M., et al. (2013). Assessing “Dangerous Climate Change”: Required reduction of carbon emissions to protect young people, future generations and nature. *PLoS One*, 8(12), Article e81648.
- Hastings, O. P. (2019). Who feels it? Income inequality, relative deprivation, and financial satisfaction in U.S. States, 1973–2012. *Research in Social Stratification and Mobility*, 60, 1–15.
- Holt, R. P. F., & Greenwood, D. T. (2012). Negative trickle-down and the financial crisis of 2008. *Journal of Economic Issues*, 46(2), 363–707.
- Hwang, S., & Lee, J. (2017). Conspicuous consumption and income inequality. *Oxford Economic Papers*, 69(4), 870–896.
- Iacoviello, M. (2008). Household debt and income inequality, 1963–2003. *Journal of Money, Credit, and Banking*, 40(5), 929–965.
- Jachimowicz, J., Davidai, S., Goya-Tocchetto, D., Szaszi, B., Day, M. V., Tepper, S., Phillips, L. T., Mirza, M. U., Ordabayeva, N., & Hauser, O. (2020). *Inequality in researchers' minds: Four guiding questions for studying subjective perceptions of economic inequality*. <https://doi.org/10.31234/OSF.IO/GN2Z5>
- Jaikumar, S., & Sarin, A. (2015). Conspicuous consumption and income inequality in an emerging economy: Evidence from India. *Marketing Letters*, 26(3), 279–292.
- Kasser, T. (2002). *The high price of materialism*. Cambridge: MIT.
- Keshabyan, A., & Day, M. V. (2020). Concerned whether you'll make it in life? Status anxiety uniquely explains job satisfaction. *Frontiers in Psychology*, 11, 1523.
- Krueger, D., & Perri, F. (2006). Does income inequality lead to consumption inequality? Evidence and theory. *The Review of Economic Studies*, 73(1), 163–193.
- Layte, R. (2012). The association between income inequality and mental health. *European Sociological Review*, 28(4), 498–511.
- Layte, R., McCrory, C., Cheallaigh, C. N., et al. (2019). A comparative analysis of the status anxiety hypothesis of socio-economic inequalities in health based on 18,349 individuals in four countries and five cohort studies. *Scientific Reports*, 9(1), 796.
- Layte, R., & Whelan, C. T. (2014). Who feels inferior? A test of the status anxiety hypothesis of social inequalities in health. *European Sociological Review*, 30(4), 525–535.
- Lee, H., & Painter, G. D. (2016). Consumption inequality in the great recession. *Journal of Economic and Social Measurement*, 41(2), 145–166.
- Lynch, et al. (2019). *Measuring the ecological impact of the wealthy: Excessive consumption, ecological disorganization, green crime, and justice*.
- Mason, R. S. (1998). *The economics of conspicuous consumption: Theory and thought since 1700*. Cheltenham: Edward Elgar.
- Matos, C. (2019). Inequality and crisis: Conspicuous consumption as the missing link in the Portuguese case. *Journal of Economic Issues*, 53(1), 26–38.
- Melita, D., Willis, G. B., & Rodríguez-Bailón, R. (2021). Economic inequality increases status anxiety through perceived contextual competitiveness. *Frontiers in Psychology*, 12. <https://doi.org/10.3389/fpsyg.2021.637365>
- Mi, L., Yu, X., Yang, J., & Lu, J. (2018). Influence of conspicuous consumption motivation on high-carbon consumption behavior of residents—an empirical case study of Jiangsu province, China. *Journal of Cleaner Production*, 191, 167–178.
- Mugleton, N., Trendl, A., Walasek, L., Leake, D., Gathergood, J., & Stewart, N. (2022). Workplace inequality is associated with status-signaling expenditure. *Proceedings of the National Academy of Sciences*, 119(15). <https://doi.org/10.1073/pnas.2115196119>
- Ordabayeva, N., & Chandon, P. (2011). Getting ahead of the Joneses: When equality increases conspicuous consumption among bottom-tier consumers. *Journal of Consumer Research*, 38(1), 27–41.
- Paskov, M., Gërçhani, K., & Van De Werfhorst, H. G. (2017). Giving up on the Joneses? The relationship between income inequality and status-seeking. *European Sociological Review*, 33(1), 112–123.
- Phillips, L. T., Tepper, S., Goya-Tocchetto, D., Davidai, S., Ordabayeva, N., Mirza, M. U., Szaszi, B., Day, M. V., Hauser, O., & Jachimowicz, J. (2020). *Inequality in people's minds*. <https://doi.org/10.31234/OSF.IO/VAWH9>
- Pickett, K. E., & Wilkinson, R. G. (2015a). Income inequality and health: A causal review. *Social Science & Medicine*, 128, 316–326.
- Pickett, K. E., & Wilkinson, R. G. (2015b). Income inequality and health: A causal review. *Social Science & Medicine*, 128, 316–326.
- Präg, P., Mills, M. C., & Wittek, R. (2016). Subjective socioeconomic status and health in cross-national comparison. *Social Science & Medicine*, 149, 84–92.
- Rackow, K., Schupp, J., & Von Scheve, C. (2012). Anxiety and anger. On the emotional dimensions of social inequality. *Zeitschrift für Soziologie*, 41(5), 392–409.
- Rajan, R. G. (2010). *Fault lines: How hidden fractures still threaten the world economy*. Princeton, NJ: Princeton University Press.
- Rodríguez-Bailón, R., Sánchez-Rodríguez, A., García-Sánchez, E., Petkanopoulou, K., & Willis, G. B. (2020). Inequality is in the air: Contextual psychosocial effects of power and social class. *Current Opinion in Psychology*, 33, 120–125.
- Rucker, D. D., & Galinsky, A. D. (2008). Desire to acquire: Powerlessness and compensatory consumption. *Journal of Consumer Research*, 35(2), 257–267.
- Ryoo, S., & Kim, Y. K. (2014). Income distribution, consumer debt and keeping up with the Joneses. *Metroeconomica*, 65(4), 585–618.
- Schneider, S. M. (2019). Why income inequality is dissatisfying - perceptions of social status and the inequality-satisfaction link in Europe. *European Sociological Review*, 35(3), 409–430.
- Schor, J. (1998). *The overspent American: Upscaling, downshifting, and the new consumer* (1st ed.). New York: Basic Books.
- Sexton, S. E., & Sexton, A. L. (2014). Conspicuous conservation: The prius halo and willingness to pay for environmental bona fides. *Journal of Environmental Economics and Management*, 67(3), 303–317.
- Shwom, R., & Lorenzen, J. A. (2012). Changing household consumption to address climate change: Social scientific insights and challenges. *Wiley Interdisciplinary Reviews. Climate Change*, 3(5), 379–395.
- Slater, D. (1997). *Consumer culture and modernity*. Cambridge: Cambridge, MA: Polity; Blackwell.
- Sommet, N., Morselli, D., & Spini, D. (2018). Income inequality affects the psychological health of only the people facing scarcity. *Psychological Science*, 29(12), 1911–1921.



- Sun, W., & Wang, X. (2013). Do relative income and income inequality affect consumption? Evidence from the villages of rural China. *Journal of Development Studies*, 49(4), 533–546.
- Thompson, J. (2018). Rising top incomes and increased borrowing in the rest of the distribution. *Economic Inquiry*, 56(2), 686–708.
- Urry, J. (2010). Consuming the planet to excess. *Theory, Culture & Society*, 27(2–3), 191–212.
- Van Treeck, T. (2014). Did inequality cause the U.S. financial crisis? *Journal of Economic Surveys*, 28(3), 421–448.
- Veblen, T. (1992). *The theory of the leisure class/thorstein veblen; with an introduction by C. Wright Mills*. New Brunswick, U.S.A.: Transaction.
- Velandia-Morales, A., Rodriguez-Bailon, R., & Martinez, R. (2022). Economic inequality increases the preference for status consumption. *Frontiers in Psychology*, 12, Article 809101.
- Walasek, L., Bhatia, S., & Brown, G. D. A. (2018). Positional goods and the social rank hypothesis: Income inequality affects online chatter about high- and low-status brands on twitter. *Journal of Consumer Psychology*, 28(1), 138–148.
- Walasek, L., & Brown, G. D. A. (2015a). Income inequality and status seeking: Searching for positional goods in unequal U.S. States. *Psychological Science*, 26(4), 527–533.
- Walasek, L., & Brown, G. D. A. (2015b). Income inequality, income, and internet searches for status goods: A cross-national study of the association between inequality and well-being. *Social Indicators Research*, 129(3), 1001–1014.
- Wilkinson, R. G., & Pickett, K. (2010). *The spirit level: Why equality is better for everyone*. London: Penguin.
- Wilkinson, R. G., & Pickett, K. E. (2017). The enemy between us: The psychological and social costs of inequality. *European Journal of Social Psychology*, 47(1), 11–24.
- Wilkinson, R. G., & Pickett, K. (2018). *The inner level: How more equal societies reduce stress, restore sanity and improve everybody's well-being*. London: Allen Lane.
- Wisman, J. D. (2013). Wage stagnation, rising inequality and the financial crisis of 2008. *Cambridge Journal of Economics*, 37(4), 921–945.
- Wood, J. D. G. (2020). Can household debt influence income inequality? Evidence from Britain: 1966–2016. *The British Journal of Politics & International Relations*, 22(1), 24–46.