

Saamah Abdallah* and Sven Jöckel

Cultivation and the dual process of dangerous and competitive worldviews – A theoretical synthesis

<https://doi.org/10.1515/commun-2020-0069>

Abstract: Cultivation research suggests that media use, particularly TV, is associated with a wide range of politically relevant views and attitudes, including perceptions of the world as a mean and dangerous place, authoritarianism, and perceived meritocracy. However, little attempt has been made to understand how these effects relate to one another and to broader models of political psychology. We present a new Cultivation–Political Psychology Interface Model, which uses Duckitt’s Dual Process Model (2001) of political psychology as a lens to understand cultivation research. Many seemingly distinct cultivation effects related to political attitudes can thus be reduced to two overall dimensions: dangerous and competitive worldviews. We identify evidence gaps, particularly in terms of competitive-worldview effects and related political attitudes. Our model generates a landscape of attitudes and beliefs, whereby some attitudes are hypothesized to be more upstream than others, leading to testable hypotheses for future research.

Keywords: cultivation, ideology, dual process model, mean world, competitive world, political psychology, perceived meritocracy

1 Introduction

Cultivation theory claims that people’s views of the world are shaped by the broad narratives of the media, particularly television (Gerbner and Gross, 1976). Perhaps the best-known finding of cultivation research has been TV’s role in cultivating a view of the world as a mean and dangerous place (Gerbner, Gross, Morgan, Signorielli, and Shanahan, 2002). TV has also been implicated in cultivating, *inter alia*, materialist views (Shrum, Lee, Burroughs, and Rindfleisch, 2011), authoritarianism (Shanahan, 1998), and economic system justification (Stavrositu, 2014).

*Corresponding author: Saamah Abdallah, Seminar for Media and Communication, University of Erfurt, Germany, E-Mail: saamah@gmail.com.

Sven Jöckel, Seminar for Media and Communication, University of Erfurt, Germany, E-Mail: sven.joeckel@uni-erfurt.de.

Despite the fertility of cultivation theory in generating empirical research related to such politically relevant attitudes, there has been little attempt to structure these findings. Several questions remain unanswered, such as whether the effects found are entirely independent or part of the same phenomenon, and whether there are specific dimensions of cultivation related to different types of content or genre.

Therefore, in our conceptual paper, we develop a *Cultivation–Political Psychology Interface Model* (CPPIM) that uses one of the leading models of political psychology, the Dual Process Model (DPM) (Duckitt, 2001), to structure and understand a range of politically relevant cultivation effects. The goal of our approach is to provide a model that helps to understand the links between the cultivation of mean worldviews, authoritarianism, and support for right-wing politicians. This approach helps identify and overcome a gap in the evidence base linked to competitive worldviews, and hypothesize potential further effects related to economic policy attitudes. In doing so, it suggests cultivation theory plays a role in understanding both the recent successes of authoritarian political actors and inaction against rising economic inequality.

2 State of research on Cultivation Theory

Cultivation theory is one of the best-known communication theories (Bryant and Miron, 2004) and, arguably, the theory of choice to explain media users' perceptions of reality. As of 2015, more than 600 studies had been published related to cultivation (Morgan, Shanahan, and Signorielli, 2015). Cultivation theory (Gerbner, 1969; Gerbner and Gross, 1976), most likely due to its origins in the 1970s, has very much focused on television as the medium with the greatest impact on users. It argues that television portrays the world in a particular way, and that this portrayal has a pervasive long-term effect on people's perceptions and attitudes. Cultivation research has shown that heavy TV viewers believe the real world to more closely resemble the world portrayed on TV than lighter users.

The signature findings of cultivation research have been that TV portrays a disproportionate amount of violence and that people who view more TV are more likely to believe that they are living in a mean and dangerous world; the “mean world effect” (Gerbner and Gross, 1976). Even with TV use in partial decline, cultivation research is still of relevance, and articles argue for comparable cultivation effects from media such as video games (Williams, 2006) and social media (Hermann, Eisend, and Bayón, 2020; Stein, Krause, and Ohler, 2021).

Genre-specific effects and beyond TV

One of the ongoing debates within cultivation research concerns the existence and relevance of genre-specific effects. Immediately after cultivation theory was elucidated, Hawkins and Pingree (1981) demonstrated that cultivation effects depended to some extent on the genres that people watched. Grabe and Drew (2007) found that the mean world effect was particularly strong amongst those who watch non-fictional ‘reality’ crime shows, and Romer, Jamieson, and Aday (2003) linked it to viewing local news. Other cultivation effects have also been linked to particular genres. For example, Glynn, Huges, Reineke, Hardy, and Shanahan (2007) found that heavy viewing of talk shows such as *The Oprah Winfrey Show* was associated with greater support for government intervention in family issues.

However, the existence of genre-specific effects, and their relevance to cultivation, is not without controversy. Morgan and Shanahan (2010) argue that genre-specific effects are not in line with the original definition of cultivation, which specifically called to attention the *overall* message of television broadcasting as opposed to the messages in individual programs or genres. They do not entirely dismiss genre-specific cultivation but warn that genre-specific research “can fragment the systemic aspects of the overall viewing experience, and observed relationships may reflect selective exposure more than cultivation” (p. 341) and note that cultivation is about “the bucket, not the drops” (p. 340).

The importance of this debate has grown with the increasing choice available to viewers, first in terms of cable TV and then the advent of on-demand viewing and online content (Morgan et al., 2015) as well as social media. These expanding choices contribute to audience (and user) fragmentation (Webster and Ksiazek, 2012). No longer can viewers be assumed to be non-selective, their television (or media) diet guided “by the clock” (Gerbner, Gross, Signorielli, Morgan, and Jackson-Beeck, 1979, p. 180).

Having said that, research on audience fragmentation (Webster and Ksiazek, 2012) as well as on media repertoires (Hasebrink and Popp, 2006) shows that media use is far from individualized and media users are still confronted with a set of messages that are broadly consistent with one another. This is perhaps no longer a unified television-mediated message but rather a set of messages that are shared across a broad range of media outlets, from TV to online streaming to social media content. As such, cultivation theory maintains its relevance (Stein et al., 2021).

Our proposed model sets out to provide a tool for understanding the variation in effects of different genres without unduly fragmenting the idea of an overall cultivation effect.

First and second-order effects

A distinction is frequently made between first and second-order cultivation effects (Hawkins and Pingree, 1982; Morgan and Shanahan, 2010; Shrum, 2004)¹. While first-order cultivation effects involve probability judgements or estimates of frequency (for example, the percentage of crimes that are violent) that can be objectively verified, second-order effects involve a broader, but less studied, category including more qualitative beliefs, stereotypes, attitudes, or values (Shrum, 2004; Shrum et al., 2011). Shrum argues that there is a substantive difference in the processes behind first-order and second-order effects.

The former involves judgements about reality that are only made at the point of recall, using simple heuristics. Research has often used prevalence estimates, for example, the prevalence of violent crime. Media use can influence the heuristics used in making such an estimate by making examples of violent crimes more accessible to memory, thus elevating people's responses (Shrum, 2004).

In contrast, the judgements involved in second-order cultivation are hypothesized to be formed (or modified) *during* media consumption. As such experimental manipulations at the point of recall have been found to have minimal effects on second-order cultivation, which is instead moderated by variables related to viewing experience, for example, transportation (the extent to which a viewer becomes involved in a story, Shrum et al., 2011) or narrative engagement (Bilandzic, Schnell, and Sukalla, 2019).

Shrum's (2004) elaboration of mechanisms for both first-order and second-order cultivation, experimental evidence he cites, and more recent experiments manipulating the conditions for cultivation (e. g., Bilandzic and Busselle, 2008) support the idea that cultivation represents a causal process rather than just a correlational effect.

Cultivation Theory and politically relevant attitudes

The mean world effect is clearly relevant to political attitudes. Indeed, Gerbner and colleagues speculated early that mean world effects may lead heavy viewers to be "reliant on authority [and] asking for more protection or worse to gain security" (Gerbner, Gross, Signorielli, Morgan, and Jackson-Beeck, 1979, p. 196). This speculation has since been partly validated: A greater disposition towards

¹ Some also refer to third-order cultivation effects in reference to behavior (Wünsch, Nitsch, and Eilders, 2012).

authoritarianism has been found amongst heavy TV viewers (Morgan and Shanahan, 2017; Shanahan, 1998).

However, these studies did not test for the intermediary role of mean world effects that was originally implied by Gerbner and colleagues. Rather, Morgan and Shanahan (2017) explored a different mediation effect, with authoritarianism cultivated by TV found to increase the propensity to support Donald Trump as presidential candidate.

Another set of studies has explored effects from viewing reality TV, particularly competition-based reality TV. Even though at first sight such effects of competition-based reality TV appear unrelated, they are, as is argued here, examples of a second set of politically relevant attitudes.

Barton (2007) carried out one of the earliest studies looking at the cultivation effects of reality TV. She found that consumption of competition-based reality TV correlated positively with increased perceptions of lying and manipulation in society. Stavrositu (2014) contributes to an understanding of the potential effects of reality TV by arguing that competition-based reality TV emphasizes the ideal of merit-based achievement and “rags-to-riches” life trajectories. As Cowell (2013, para. 5) puts it, “American Idol dramatizes ... the popular narrative of the American dream, the idea that anyone can make it. Or rather, anyone can attempt to make it, but only the best will”. Stavrositu tested this hypothesis using Economic System Justification (ESJ) as her cultivation variable. ESJ (Jost and Thompson, 2000) measures the extent of agreement with statements such as “If people work hard, they almost always get what they want” and “Most people who don’t get ahead in our society should not blame the system, they have only themselves to blame”. It is in effect a measure of perceived meritocracy. As Stavrositu (2014) hypothesizes, greater viewing of competition-based reality TV shows was associated with higher ESJ scores. The effect held even when controlling for the participants’ income and self-reported ideology.

For Kim (2019), the dependent variable was belief in economic mobility. Importantly, she also found evidence to support a causal effect by conducting an experiment whereby participants saw either a reality TV program with a rags-to-riches competitive element or a reality TV program without any competitive element.

These strong cultivation effects from reality TV are theoretically consistent given that, unlike traditional fictional programming (e.g., films or sitcoms), reality TV purports to present “real people” as opposed to actors (Reiss and Wiltz, 2004). Viewers of reality TV perceive that the feelings and behaviors portrayed are real (Aslama and Pantti, 2006). Unlike news, reality TV often purports to present “normal people”, doing relatively normal things. Indeed, some have described reality TV as “appealing to the basic human quest for truth and need for genu-

iness” (Reiss and Wiltz, 2004, p. 370). Given that perceived realism has been found to moderate the magnitude of cultivation effects (Busselle, Ryabovolova, and Wilson, 2004), one would therefore expect that reality shows would generate strong cultivation effects.

Moving on from reality TV, one final cultivation study (Appel, 2008) is relevant for this paper as it included an outcome variable which is conceptually similar to the ESJ variable studied by Stavrositu (2014). Appel notes that fictional programming in general frequently follows a meta-narrative in which there are “good guys/girls” and “bad guys/girls”, and the good guys/girls normally win. He finds that viewers (in Germany and Austria) who view more fictional TV are therefore more likely to score high on *Belief in a Just World* (Lerner, 1980).² In parallel, what Appel calls “infotainment” programming, which included a mixture of reality crime shows and celebrity gossip (*Boulevardmagazine*), cultivated perceptions of a *mean* world. Appel notes correctly that these two conceptions are not mutually exclusive – one can believe that the world is mean but just.

Condensing cultivation effects: The dual process model of ideology

In summary, the current state of research on cultivation suggests that TV not only cultivates a perception of the world as mean, but also authoritarian political ideologies and views regarding the current economic system. Based on our earlier discussion of cultivation beyond TV, we assume that these effects can apply to all media. We propose that these effects can be understood with the help of Duckitt’s Dual Process Cognitive-Motivation Model of Ideology and Prejudice (DPM) (2001). This model synthesizes two leading approaches to understanding individual variation in prejudice and ethnocentrism: authoritarianism and social dominance theory. Duckitt’s approach to authoritarianism draws on Altemeyer (1988), who defines it as: a) believing in the importance of submitting to established authorities, b) aggressing against out-groups, and c) upholding traditions and conventions. Altemeyer argues that authoritarianism has multiple causes, with adolescence and young adulthood seen as a critical period in its development. He also identifies one key causal factor, which is the propensity to see the world as a dangerous place: “High RWA’s [right-wing authoritarians] are scared. They see

² Belief in a just world is not exactly the same as perceived meritocracy, because it is about life in general, not just the economic system. However, it is closely related and indeed has been used as a proxy measure for economic system justification in the past (Jost and Banaji, 1994).

the world as a dangerous place, as society teeters on the brink of self-destruction from evil and violence. This fear appears to *instigate* aggression in them” (Altemeyer, 1998, p. 52).

If the world is full of danger, then order and security must be priorities. Novelty is something to be avoided because it brings uncertainty, which potentially could mean new dangers. It is best, in the circumstances, to cling to the status quo and resist social change. Note that this perspective mirrors the relationship between mean world effects and political attitudes speculated by Gerbner et al. (1979) and reflects the assumptions in cultivation research on how TV viewing leads to authoritarianism (e. g., Shanahan, 1998). Altemeyer (1998) reported a high correlation ($r=0.49$) between belief in a dangerous world and Right-Wing Authoritarianism (RWA), an effect that has been corroborated in more recent studies (Duckitt, 2001).

The second approach Duckitt integrates in his model is Social Dominance Theory (Sidanius and Pratto, 1999). Social Dominance Theory attempts to explain how group hierarchies are formed and preserved. It gives a central role to “hierarchy-legitimizing myths” in maintaining the status quo and demonstrates how they are internalized even amongst those lower down in society. These myths include beliefs justifying economic inequality (e. g., “anyone can make it if they try”) or racial inequality (e. g., “black people are lazy”). Pratto and Sidanius developed a measure of Social Dominance Orientation (SDO), which is the extent to which an individual buys into the hierarchy. In their words, SDO is a “general attitudinal orientation toward intergroup relations, reflecting whether one generally prefers such relations to be equal versus hierarchical” and the “extent to which one desires that one’s ingroup dominate and be superior to outgroups” (Pratto, Sidanius, Stallworth, and Malle, 1994, p. 742). SDO predicts the extent to which people endorse the consensus hierarchy and these myths and is associated both with outgroup discrimination and sexism (Sidanius and Pratto, 1999).

Both outcomes have also been found to be related to authoritarianism. However, social dominance theorists argue that SDO is distinct to RWA, the latter relating to intra-group relations and the former to inter-group relations (e. g., Pratto et al., 1994). Correlations between RWA and SDO vary depending on the sample and have been found to be sometimes positive, sometimes insignificant, and sometimes even negative (Hiel and Kossowska, 2007).

This orthogonality is central to Duckitt’s (2001) DPM (presented in Figure 1).³ The model proposes two parallel systems of personality, worldview, and ideolog-

³ The orthogonality of the model has also been confirmed in other ways. For example, Sibley and Duckitt (2008) examined correlations between the Big-Five personality traits and RWA and

ical attitudes leading to RWA, on the one hand, and SDO, on the other. Although Duckitt, like the originators of both the RWA and the SDO, is primarily interested in the causes of prejudice, conflict, and discrimination, his model has inspired other authors to develop two dimensions for policy in general. Duckitt (2001) himself notes that the two dimensions “represent two basic sociopolitical and sociocultural attitude-value-belief dimensions” (p. 49). Since then, RWA has been confirmed to predict cultural conservatism (for example, support for religious education at school), whereas SDO predicts economic conservatism (for example, support for a flat tax rate) in samples in Western and Eastern Europe (Duriez, Van Hiel, and Kossowska, 2005) and New Zealand (Perry and Sibley, 2013). As such, the DPM offers a framework for understanding a broad suite of political attitudes.

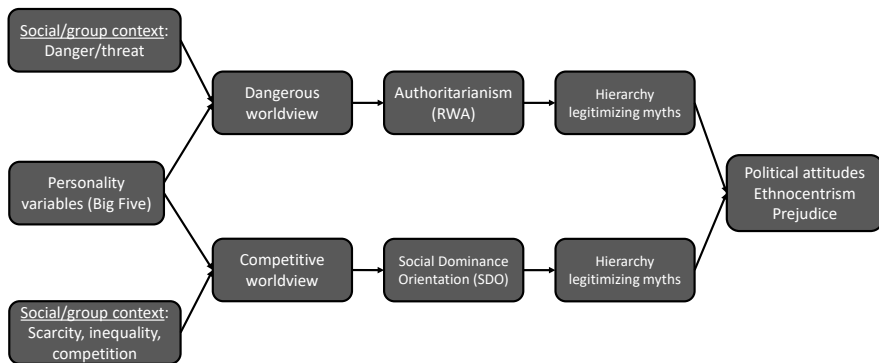


Figure 1: Dual Process Model, adapted from Duckitt and Sibley (2009).⁴

The bi-dimensionality of DPM is important given the emerging consensus in political psychology and political science more broadly that sees political attitudinal space structured on two dimensions, as opposed to just one (De Vries and Marks, 2012; Feldman and Johnston, 2014; Rokeach, 1973).

SDO, and found the two attitude dimensions were associated with different personality makeups. ‘Hostile’ sexism is associated with SDO, but ‘benevolent’ sexism is associated with RWA (Sibley, Wilson, and Duckitt, 2007). RWA predicts aggression towards immigrants who do not assimilate, whilst SDO predicts aggression towards those that do (Thomsen, Green, and Sidanius, 2008).

⁴ The social/group context variables included in the diagram are not central to our thesis and not discussed here further.

DPM gives the dangerous worldview a special place in explaining authoritarian ideology (see Figure 1), seeing it as the key direct antecedent. Arguably, this gives the media's cultivation of worldviews a central role in the formation of political attitudes. Importantly for our approach, DPM also identifies SDO as being molded by another, distinct, worldview – that of a competitive world. A competitive worldview is defined as:

Belief that the social world is a competitive jungle characterized by a ruthless, amoral struggle for resources and power in which might is right and winning is everything versus belief that the social world is a place of cooperative harmony in which people care for, help, and share with one another. (Perry, 2013, p. 25)

This echoes some of the concepts measured in media-effects research, in particular the effect of reality TV viewing on perceptions of deceit in society (Kim, 2019).

Meta-analysis confirms that the links between each worldview and its corresponding ideological dispositions are robust and consistent (Perry, Sibley, and Duckitt, 2013). Longitudinal panel research shows that worldviews at one point in time predict future changes in RWA and SDO, thus providing support for the causal predictions of the theory (Sibley and Duckitt, 2013). Other studies have manipulated worldviews with hypothetical future-scenarios and found a subsequent effect on RWA (e. g., Duckitt and Fisher, 2003).

DPM's conception of worldviews is built on anthropological research by Ross (1993), which argues that they are primarily shaped through socialization during childhood. The model, however, also proposes an ongoing influence on worldviews from social and group context, which potentially could include media influence.

In summary, the evidence and theoretical support for the idea that worldviews have a causal effect on political ideology is strong and varied, and DPM's conception of worldviews is compatible with an influence from media via cultivation.

Integrating cultivation effects into DPM

Given the links between a dangerous worldview and authoritarianism, it is no surprise that cultivation researchers have found effects of overall TV viewing on both these constructs (Gerbner and Gross, 1976; Shanahan, 1998). Based on DPM, we can argue that media use does not make us more authoritarian directly, but rather it makes us perceive the world as a more dangerous place, and *this* makes us more authoritarian. One of the implications of this is that, if certain

genres are more associated with a mean worldview (e. g., Grabe and Drew, 2007; Hawkins and Pingree, 1981), then they should also be more associated with an authoritarian disposition. Furthermore, as Morgan and Shanahan (2017) demonstrate, TV viewing (and media consumption in general) can also influence political preferences, mediated via authoritarian disposition (and therefore also by dangerous worldview). Based on DPM, one would expect that many other political attitudes and preferences are potential dependent variables in cultivation research.

Perhaps more importantly, DPM also provides a framework for understanding some of the newer effects being found by cultivation researchers, particularly in relation to competition-based reality TV. Both Stavrositu (2014) and Kim (2019) found that heavy viewers of competition-based reality TV are more likely to believe that their economic system is just and that those who work hard can make it – perceived meritocracy. These beliefs are seen by social dominance theory as hierarchy-legitimizing myths (Pratto et al., 1994; Sidanius and Pratto, 1999) that legitimize right-wing economic policy preferences. If the rich are rich because of hard work and talent, then there is no reason for them to be apologetic and to redistribute wealth. In a longitudinal study, perceived meritocracy was found to predict such policy positions but not the reverse (Sibley and Duckitt, 2010). This suggests that, in the long-term, frequent viewing of reality TV could be expected to lead to more right-wing economic policy preferences. This is consistent with the argument that reality TV pushes a neoliberal political agenda (Van Bauwel and Carpentier, 2010) and is a suggestion that Kim (2019) made but did not test empirically.

It is important to note that perceived meritocracy plays a different role in the DPM than a dangerous worldview. Dangerous and competitive worldviews are seen as developing through early socialization (Ross, 1993) and antecedent to political dispositions. These worldviews represent understandings of human nature which should theoretically be applied to all societies. Perceived meritocracy, on the other hand, is a belief that develops later in life, driven by a high social dominance orientation. In other words, the preference for a society based on hierarchy *precedes* the justification of that preference through the belief that the hierarchy is fair. This causal direction was also supported by Sibley and Duckitt (2010). Furthermore, perceived meritocracy is an assessment of a particular society – one might believe that one country is meritocratic whilst another is not.

This raises a question regarding the effects found by Stavrositu (2014) and Kim (2019). One possibility is that competition-based reality TV has a direct effect on perceived meritocracy. This may have a knock-on effect on attitudes towards specific policies (for example, taxation policy or affirmative action), but one can

assume that any effect on SDO would be minimal. An alternative is that competition-based reality TV influences competitive worldviews: seeing human interaction as cut-throat, where everyone is out there for themselves and everything goes in terms of achieving one's goals. Stavrositu's (2014) finding of an effect on meritocracy would then be a secondary effect, mediated by increased competitive worldview and increased SDO. Stavrositu actually did measure SDO in her study, but she treated it as a control variable, rather than a potential mediating factor.

The earlier results on the effects of competition-based reality TV from Barton (2007) provide a clue that perhaps at least part of the effect found by Kim (2019) and Stavrositu (2014) was mediated via competitive worldview. Without realizing it, Barton's measures regarding perceptions of lying and manipulation in society were a rather good approximation to a measure of competitive worldviews rather than being measures of a mean worldview as she had intended.⁵

The cultivation – Political psychology interface model

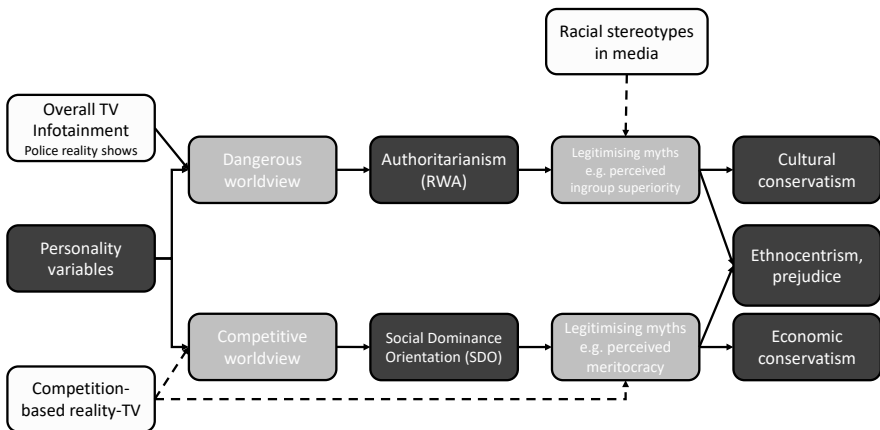


Figure 2: Cultivation–Political Psychology Interface Model, building on Perry & Sibley (2013) and integrating cultivation effects.

Key: White boxes – influences from media use; light gray boxes – descriptive beliefs; dark gray boxes – normative positions.

⁵ This explains why she found that the effects on measures of perception, lying, and manipulation were not consistent with the effects on traditional mean-world measures.

Figure 2 shows how the cultivation effects discussed can potentially be mapped onto DPM. Dashed lines indicate either inconclusive evidence, such as in the case of the impact of competition-based reality TV, or possible hypothesized effects, as in the case of the effect of racial stereotypes in media on legitimizing myths. The model is based heavily on the DPM shown in Figure 1, updated to reflect the findings of Sibley and Duckitt (2010) on the role of legitimizing myths and Perry and Sibley (2013) on the links to economic and social-policy attitudes. We have replaced the two exogenous effects of social and group context of the model with media use. This is for purposes of parsimony. We are not claiming that the *only* social and group effects on worldviews come from the media, nor are we saying that the media are the *only* factor which shapes attitudes beyond personality. But we are claiming, based on cultivation research, that much of people's perceptions about how the world is – for example, the risk posed by migrant groups or the morality of others in general – is learned via media.

Various lessons can be drawn from the Cultivation–Political Psychology Interface Model (CPPIM). First, political attitudes amongst the public are most usefully understood as being structured in a two-dimensional space, that is, social policy on one dimension, economic policy on the other. As such, hypotheses on the relationship between media use and political attitudes should be explicit as to which of the two dimensions is most relevant. This does not rule out the existence that sometimes both dimensions are relevant, but conceptually the dimensions should be differentiated.

Second, media influences can be characterized as either upstream (influencing dangerous or competitive worldviews) or downstream (influencing more specific attitudes and legitimizing myths). Wherever they are, they can be expected to influence other attitudes and beliefs that lie downstream of them.⁶

The model as it stands does not accommodate any direct effects from media use to normative positions – either in terms of broad dispositions such as authoritarianism or more specific political preferences. All the effects modelled here are hypothesized to flow through effects on beliefs about how the world is, not how it should be. This might seem like an unrealistically strong position. After all, specific effects on political attitudes from viewing certain films have already been found, such as increased support for government health care (Adkins and Castle, 2014) and increased levels of authoritarianism (Glas and Taylor, 2018). It is plau-

⁶ Upstream and downstream are terms regularly used in public health (e. g., Gehlert et al., 2008) and in structural equation modelling (Division of Statistics & Scientific Computation, 2012) to refer to different factors within causal models. Upstream factors are those at the 'start' of a causal model and are more distal/exogenous, whereas downstream factors occur 'later' in the causal model and are more proximal to a given outcome.

sible that these effects were not mediated by dangerous worldview or perceived meritocracy. However, these are relatively short-term effects from viewing single films and, as Morgan and Shanahan (2010) would argue, not cultivation effects that reflect an ongoing and consistent narrative in the media.

3 Implications

The CPPIM leads to two broad implications that can be tested with specific hypotheses: first, that there are two distinct dimensions of political attitudes, which are differentially influenced by different types of media. This implies the need to identify which genres (or types of content) are more or less relevant to each dimension. Mapping extant cultivation research to the CPPIM makes it clear that the second pathway, in particular evidence of media influencing a competitive worldview and associated socio-political attitudes, is currently severely understudied. Future cultivation research is advised to compensate for this. Alongside reality TV, other genres that reflect a regular narrative of a dog-eat-dog world should be considered. Second, the model presents a clear testable causal pathway of which beliefs affect which attitudes. This allows one to distinguish between effects that are more upstream and those that are more downstream and to test these claims.

For instance, we can hypothesize that the consumption of crime news, local news, and police reality shows is associated with higher levels of authoritarianism. This hypothesis is based on the finding that mean worldview and authoritarianism are related and that all the above genres have been associated with a mean worldview (e.g., Appel, 2008; Grabe and Drew, 2007). Consistent with other cultivation research, various variables may moderate this effect, including transportation as a measure of engagement with a story (Bilandzic and Busselle, 2008), need for cognition as a measure for cognitive involvement (Shrum, 2009), age, and socio-economic status (Shanahan, 1998). Following on from this, and consistent with Morgan and Shanahan (2017), we expect that consumption of the above types of media is also associated with certain political preferences (for example, for authoritarian leaders such as Donald Trump) and more conservative social policy positions.

Another testable claim made by the CPPIM is that media use does not generally directly cultivate authoritarianism, but it rather cultivates a mean worldview which should lead to increasing authoritarian dispositions.

Looking at the second dimension in the CPPIM and supposing that the findings of Barton (2007) are robust, then heavy viewing of competition-based reality

TV should be associated with a view of the world as a competitive place, where everyone is out for themselves. Following DPM, this should also be reflected in higher levels of SDO. Furthermore, it should be possible to show that the effects on perceived meritocracy found in Stavrositu (2014) and Kim (2019) were mediated by effects on a competitive worldview.

Regardless of whether the effect of reality TV on perceived meritocracy is direct or mediated by an effect on competitive worldview, the DPM suggests that there should be a further downstream effect on economic policy attitudes, with those who watch more reality TV more supportive of right-wing economic policy.

On a more general note, the CPPIM has some further implications for cultivation research. Firstly, methodologically, political psychology offers a set of scales that can be used to assess attitudes and beliefs that are relevant to cultivation research. In particular, the Competitive World Scale (Duckitt, 2001) would be a valuable addition for future research.

Secondly, analogous to the possible direct cultivation effect on legitimizing myths that support high SDO, we wonder if there is any programming that has a direct effect on legitimizing myths supporting high RWA. This would include programs which regularly employ racial stereotypes (e. g., portraying black people as criminals or lazy). In this case, the model proposes that such stereotypes would directly affect heavy media users' endorsement of such myths but would not have a direct effect on RWA nor on their view of the world as dangerous.

Thirdly, echoing Bilandzic et al. (2019), we ask if cultivation research can identify genres or programming which have a functional or *positive* contribution to attitudes rather than solely framing media effects as detrimental or harmful. Interestingly, Bilandzic and colleagues include amongst the positive effects an increase in *Belief in a Just World*. However, we have conceptualized this belief as a legitimizing myth that justifies economic inequality, and so we have not cast it in a positive light. Meanwhile, programming could also promote legitimizing myths associated with *low* SDO and *low* RWA (Sidanius and Pratto, 1999).

More broadly, our model demonstrates a value in a genre-sensitive view of cultivation, thus providing a response to those who have critiqued genre-specific cultivation effects (Morgan and Shanahan, 2010; Potter, 2014). For these critics, the term "cultivation" should be reserved only for effects produced by overall media messages. Doing so, however, makes cultivation blind to the distinct but interlinked effects of different genres and types of media that still broadcast a coherent message. The evidence we have reviewed in this paper shows that variations in media diet are associated with variations in attitudes, and we argue that this effect should indeed be considered cultivation, given that it a) reflects the effect of an individual's complete media repertoire rather than that of just a single program, b) is long-term rather than just a short-term priming effect (although

short-term effects may be part of the mechanism), and c) has implications for attitudes about society as a whole, and *in* society as a whole.

Strictly speaking, such effects are unlikely to be *genre-specific* as such (i. e., only cultivated by one genre) but rather genre-dependent. Certain genres represent certain narratives more often than others, but these narratives transcend genre (Bilandzic and Rössler, 2004). For example, the rags-to-riches narrative identified by Kim (2019) is not unique to competition-based reality TV but can be found in children's stories, romantic dramas, and elsewhere. "Good wins over evil" is a narrative found in much fiction (Appel, 2008). And gender stereotypes which may serve as legitimizing myths are found to a lesser or greater extent in almost all types of media. Cultivation theorists should revisit the field of narratology (e. g., Propp, 1968) to identify narratives that permeate the media today and are likely to impact on attitudes and beliefs. In the context of the CPPIM, we are particularly interested in those narratives that may relate to politically-relevant attitudes and beliefs.

In creating the CPPIM, we hope that some structure can be given to claimed cultivation effects and that we can address the criticism that the term "cultivation" has been used to refer to too many unconnected phenomena. Rather, we argue that many cultivation effects, both genre-dependent and otherwise, can be understood within a single holistic framework.

4 Discussion

We have set out to integrate two bodies of theory and research – cultivation research and the DPM. Reviewing existing studies, our approach has highlighted that cultivation research has focused predominantly on only one side of the DPM – the dangerous worldview (e. g., Gerbner et al., 2002). However, some recent studies (e. g., Barton, 2007; Stavrositu, 2014) suggest that media may also cultivate beliefs that are relevant to the other side of the DPM, namely a competitive worldview. We have developed a theoretical model, the CPPIM, that leads to a two-by-two framework for understanding how cultivation effects relate to politics.

In the first instance, it distinguishes between effects on what can be considered an "authoritarian stream" (dangerous worldviews lead to authoritarianism, which then strengthens socially conservative political attitudes) and effects on a "social dominance stream" (competitive worldviews lead to a social-dominance orientation, which then strengthens economically conservative political attitudes). However, it also uncovers a distinction between upstream effects (i. e.,

effects on broad worldviews) and downstream effects (i. e., effects on legitimizing myths). These theoretical distinctions help researchers make clear predictions about what perceptions and political attitudes can be expected to be associated with each kind of media use. They also help us understand and situate a range of previously reported cultivation effects from classic mean-world effects (Gerbner, 1969), to authoritarianism (Shanahan, 1998), to perceived meritocracy (Stavros-itu, 2014).

We may also wonder if cultivation plays a role in the rise of authoritarian politics worldwide (Frantz, 2018; Muis and Immerzeel, 2017) or – as Kim (2019) suggests – the willingness to ignore growing economic inequalities. To determine this would require a thorough content analysis of popular entertainment media, to assess whether the dominant narratives are consistent with these political trends. We believe our model can help frame this analysis.

We have also made the claim that our model goes some way towards rescuing so-called genre-specific cultivation research from the criticism that such cultivation is no different from any other media effects. Rather, genres provide a tool to distinguish between a small number of different meta-narratives which are present to a varying extent in almost all programs, and it is these meta-narratives which cultivate attitudes and do so differently depending on the exact media diet (or repertoire) of each individual. We would argue that a better understanding of the differential effects of different genres, programming, and types of media used is essential in an age of increasingly diversified and partially fragmented media repertoires.

Some limitations of our model need to be acknowledged. Firstly, whilst some of the evidence on which our model is based are longitudinal data (e. g., Sibley and Duckitt, 2013) or experimental (e. g., Kim, 2019), a lot is cross-sectional. This limits the confidence with which we can claim causality. Whilst we acknowledge the reciprocal nature of the effects described in our model, a possible future step would be to properly integrate the reciprocal media-effects model proposed by Slater (2007) that elucidates the interdependence between (short-lived) media effects and selection choices and may ultimately generate the long-term impacts we predict in our model.

Secondly, the cross-cultural viability of the model has not been explored. Cultivation research originated in the US, and although research is international in nature, studies often do not spell out the cultural specificities of the media systems involved but focus more on generalizable effects. A similar criticism can be made of our model, which integrates research from different cultures without exploring the consequences. It is fair to say that most of the cultivation research integrated directly into the model (e. g., Kim, 2019; Morgan and Shanahan, 2017) is based on studies in the USA.

Nevertheless, we believe there is little reason to seriously doubt the relevance of this model for other contexts, in particular the European context from which we write and with which we are familiar. Here, cultivation effects have indeed been observed, including the mean-world effect (Appel, 2008) and effects on political attitudes (Wünsch, Nitsch, and Eilders, 2012). Whilst the precise genres of relevance may be different in some cases (for example, Appel finds that in Germany, so-called *Boulevardmagazine* – tabloid television news – contribute to the mean-world syndrome), we anticipate that the relevant narrative structures are still present. In the case of reality TV, there is a certain degree of universality. For example, the originally British format *Pop Idol* has been exported worldwide and has achieved substantial market share in many countries including Germany, the USA and Indonesia. Furthermore, the political psychology literature integrated into the model has considerable international coverage. In summary, most of the pathways incorporated into the model have been demonstrated beyond the US context, and there is little reason to suspect that the others will not be corroborated in future research.

Thirdly, whilst we based our model on both theoretical arguments and empirical findings from previous studies, we did not set out to empirically test our model. We hope that this model provides a framework for future empirical studies that directly test the hypotheses we have made, studies that would ideally incorporate experimental and longitudinal methods as well as cross-sectional analyses.

Limitations aside, our model provides a useful basis for a deeper understanding of cultivation effects as a distinct media-effects theory that is further rooted in political psychology and thus brings together these two related fields.

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