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# Manipulation, Exaggeration and Conspiracy

Experimental Approaches to a Better Understanding  
of the Belief in Conspiracy Theories

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# Abstract

This dissertation will explore *conspiracy theories* from a psychological viewpoint—both theoretically and empirically. Conspiracy theories are introduced here as a phenomenon relevant for many aspects of entertainment, history, popular culture, society, politics, and ideology. The phenomenon is defined and discussed, with its epistemic characteristics and ramifications, from a philosophical viewpoint. It is argued that there is no standard practice for the judgement of conspiracy theories, and that a case-by-case consideration is a pragmatic resolution for this epistemic problem.

Along with proposing and implementing a new means of measurement for the belief in conspiracy theories in Raab, Ortlieb, Auer, Guthmann, and Carbon (2013) called *narrative construction*, it is argued that nearly everyone will construct a conspiracy theory for an important event (exemplified with the 9/11 attacks), which is probably not a sign of delusion, but of identity construction and management. However, the genesis of such beliefs is prone to distortions. The mere presence of extreme (in terms of conspiratorial value) information might foster the construction of narrations significantly more extreme—without people noticing it. In Raab, Auer, Ortlieb, and Carbon (2013), we have called this the *Sarrazin effect*. To better understand *why* conspiratorial narrations are so widespread, powerful and possibly dangerous, psychological and philosophical theories are applied; for example, narrations (and thus conspiracy theories) can be considered cognitive simulations of possible states of the world. Here, it would also be desirable to understand why a given person adheres to a *specific* narrative content, so the link between personal values (in a psychological sense) and conspiracy belief was analysed empirically. The results were reported in a conference paper (Raab, Kammerl, & Carbon, 2015). Also, a current research question is if people automatically begin to elaborate conspiracy beliefs for a new event, or if it takes psychological triggers to start this process. We found empirical evidence in Gebauer, Raab, and Carbon (2016) that information has to include testimony of causation (someone causing an event directly) and purpose (someone causing this deliberately), so that people begin to assume a conspiracy at work. To make the knowledge presented here, as well as the results gathered by researchers in the past years and decades, available to a larger audience, a work-in-progress project for a popular science book on conspiracy theories is presented.

*The conspiracy theory is the message* then (speaking with Marshall McLuhan), as those theories extend our realm of human affairs. To integrate the findings of this thesis, a construction kit for conspiracy theories is proposed; and dangers as well as chances of such narrations are discussed with regard to societal progress.

# 1 Conspiracy theories: a research program

War is Peace  
Freedom is Slavery  
Ignorance is Strength

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(George Orwell,  
Nineteen Eighty-Four)

**I**N 2015 the canary has died. The *miner's canary* was a caged bird that, in a coal mine, was (by dying) supposed to warn miners of toxic gases. Information is more important than coal in our days, and the canary is now a virtual one.

The social news aggregator site *reddit.com*<sup>1</sup> is a site with over 230 million unique visitors per month (Smith, 2016), sharing content and information about virtually everything: from world news over DIY projects, from funny cat videos to chronic illnesses, over sophisticated nature and fashion photography, up to gore, and to niche pornography. Thus, log files of user activity have the potential to reveal very much—and very intimate—information about a single user. Reddit publishes a yearly transparency report and had included a passage in the 2014 report stating:

As of January 29, 2015, reddit has never received a National Security Letter, an order under the Foreign Intelligence Surveillance Act, or any other classified request for user information. If we ever receive such a request, we would seek to let the public know it existed. (Reddit, 2015)

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<sup>1</sup>The site *reddit.com* consists of (at the time of writing) over 850,000 so-called subreddits. Such a “sub” can be created by any registered user (registration is free and does not require personal data, just a nickname and an active e-mail address; with 36 million registered users so far) and usually is dedicated to a particular topic. Registered users can post links to images, videos, websites or any other content on the web to such a subreddit. The sub is moderated by a small number of users; the first and most powerful moderator is the sub’s creator, any moderator can acclaim new moderators down this hierarchy, and can get dismissed by moderators above him. If someone wants to post own media, like a nude picture of him-/herself in a sub dedicated to exhibitionism, he/ she has to upload it to a free image hoster like *imgur.com* and then link to it from reddit. Reddit itself does not hold the content, only the references. For each single post created this way, any registered user can participate in a discussion tied to the post. Posts can be up- and downvoted by users; this way, a post’s visibility is determined. For a popular sub, any post might get thousands of contributions and votes, where some of these contributions reference other content in turn. While any posting requires registration, browsing the subs including the linked content and the discussions does not require registration. Statistics from Smith (2016).

## *Conspiracy theories: a research program*

US companies are not allowed to disclose when government agencies make requests that are classified (see Doyle, 2015), but so far the companies were not hindered to state when they have *not* received such a request. When such a paragraph (like the one cited above) is missing, users might conclude that this was done deliberately. It would be the *absence* of information—like the absence of a bird that is alive—that signifies something is wrong. This special kind of information is colloquially known as a *canary*.

In the following year, the transparency report for 2015 was published. It did not include such a paragraph (see Reddit, 2016). This was interpreted by the site’s users that the canary has died: National security organs had requested information (probably user data) and at the same time had forbidden to release any information about the request. The US government might now possess data that reveal the reddit users’ political views as well as their most intimate hopes, fears and desires. Matched with a database that relates IP addresses (unique identifiers at the technical level of internet communication) for a given time stamp with, say, *facebook* access log files, these data become person-related.

That is a conspiracy theory (while the facts stated here are true). Presumably, the US government—with an administration elected by the US people—is spying on millions of said US people, under laws ensuring absolute secrecy, with means and ends unknown. What was happening with reddit seems ominous, threatening; but we have at the moment no means to verify or refute the claim about secret data leeching. But if we value an *open society* that is democratic, liberal, and transparent in its processes and actions, we are facing the question how to handle this conspiracy theory: ignore it, although society’s most important values might be endangered; believe it although authoritative facts are sparse; or remain in an indecisive state until we eventually forget about it? While there is no easy answer, this thesis will try to tackle the phenomenon from a psychological perspective.

This dissertation is set out to contribute to a better understanding of *conspiracy theories*. A conspiracy theory (CT) is, using a preliminary definition, the more or less elaborate *accusation* directed at *two or more people* trying to *achieve something in secret*. Usually, such secret plots are sinister, affect the lives of many people, and touch existential concerns like freedom and the question of war or peace. This section will outline the many facets—and consequently, desiderata for psychological research—of conspiracy theories; and then sketch the theoretical and empirical approaches of this thesis.

## 1.1 The many shades of conspiracy (theory)

One of the most well-known causes for conspiracy theories in recent times is the attack on the World Trade Center in New York on September 11th, 2001 (hence known as 9/11): An uncounted number of theories making out the *true* masterminds and the *true* reasons for the attack are floating around in the world wide web (Swami, Chamorro-Premuzic, & Furnham, 2010; M. J. Wood & Douglas, 2013). Such alternative theories are not a privilege of shady on-line discussions and are also discussed by scholars and intellectuals (see Griffin and Scott, 2006).

Other common topics of conspiracy theories that have come under the scrutiny of researchers are the death of Princess Diana (Douglas & Sutton, 2008), climate change (Feinberg & Willer, 2011; Douglas & Sutton, 2015), advertising tricks of companies (Furnham, 2013), the assassination of John F. Kennedy (McHoskey, 1995) and many more. There are conspiracy theories full of hate that target minorities. There are conspiracy theories defending civil rights, advocating liberty and a transparent, open society. And in between, there are many petty theories floating around: that the German city Bielefeld does not exist; that John Lennon was killed by Stephen King; that Julius Caesar was not the victim of a conspiracy, but has engaged Brutus to arrange the assassination (so Caesar's death would be perceived just as epic as his life as emperor); or that the Denver airport is in truth a portal to Hell. Psychologists should be concerned with CTs for a number of reasons:

- Conspiracy theories are widespread. For example, in 1992 a representative sample of adult Americans was asked: “Do you think one man—Lee Harvey Oswald—was responsible for the assassination of President Kennedy, or do you think there were others involved?” Seventy-five percent ( $n=1282$ ) of participants answered that Oswald did not act alone (CBS News, 1993). With 69 percent assuming a conspiracy ( $N=348$ ) behind the JFK murder, Goertzel (1994) got very similar results when asking New Jersey residents. Bartoschek (2015), for a German sample in 2011, has found an approval rating of 52.31 percent ( $n=598$ ) for the item “J. F. Kennedy wurde nicht von Lee Harvey Oswald (alleine) erschossen. [J. F. Kennedy was not shot by Lee Harvey Oswald (alone).]“. Oliver and Wood (2014) found that at least half of the American public does endorse at least one conspiracy theory. General psychology is targeting cognitive and emotional processes common to all people and should be concerned by the pervasive distribution of those theories; while the psychology of personality examines individual differences in such processes and might help us to explain why not *all* people are susceptible.



- Conspiracies can be entertaining. The iconic TV series *The X-Files* (Carter et al., 1993–2002, 2016) that ran from 1993 to 2002 and that has been revived in 2016, has become paradigmatic for the entertaining aspects of CTs (see, for example, Knight, 2000, already referring to the series in the book title; and Kelley-Romano, 2008, using *The X-Files* for an analysis of the functions of the conspiracy genre in television). A recent example is also the hugely successful (Kissel, 2015) TV series *Game of Thrones*, that basically is an epic saga about cabal, intrigue and nefarious attempts to seize power in a medieval world. To explore what is entertaining to us, and why, is a question of media psychology.
- In *Game of Thrones*, that is based on the books *A Song of Ice and Fire* by George R.R. Martin, many of the conspiracies depicted have parallels in the English history; a fact that was appreciated by many fans (for an example, see Pleasance, 2014). The intrigues in William Shakespeare’s works might be considered a literary mirror of an epoch when distrust and paranoia were normality for the ruling class, and secret plots were a commonplace means of politics (MacGregor, 2013). This points to the rather obvious fact that conspiracies can be real. A well-documented case for our time is *Watergate*, a scandal in the 1970s in Washington, D.C., including wire-tapping of Democratic politicians and cover-ups by the *Central Intelligence Agency* (CIA), that culminated in the resignation of US president Richard Nixon in 1974. For the past few years, Western intelligence agencies like the US *National Security Agency* (NSA) spying on virtually any communication worldwide come to mind as an example for a huge conspiracy that turned out to be true. As conspiracies can be real, it is not wise to regard a belief in a conspiracy theory as a *false belief per se*. It is essential to examine people’s predispositions, beliefs, values, and motivation, to make substantial claims when and why someone is prone to believe a specific theory. Again, beliefs and motivations are core topics of psychology.
- The term ‘conspiracy theory’ has become a buzzword in political debate. The British Prime Minister Tony Blair, for example, has—in parliament—called it a “conspiracy theory that [the invasion in Iraq] is somehow to do with oil” (Commons and Lords Hansard, 2003). The British Prime Minister David Cameron has devaluated accusations by his prime opponent, Labour leader Ed Miliband, as “feeble conspiracy theories” (Faiola, 2011). Cameron has also accused extremist Muslims in Britain of adhering to an anti-Semitic conspiracy theory (Deacon, 2015). These examples raise the question if the term conspiracy has a quality to shape a debate that other rhetoric devices lack—begging a question that can be answered with psychological means.

## *Conspiracy theories: a research program*

- To understand and to measure why some people believe that 9/11 was an inside job (that is, an action planned and carried out by the US government, and not by al-Qaeda) is a challenge. Standard questionnaires might not be able to grasp the complexity and the many facets of such complex narrations. Questionnaires alone also are limited to beliefs people already hold. The acquisition of a conspiracy theory can be seen as a process, and consequently, measuring this process asks for means that are able to grasp these dynamics. To develop new methods for measuring complex phenomena is an important mission for psychologists.
- Turning from the people (the recipients) to the information (the message), we might also ask: Are there *cues* and *triggers* in everyday information that might provoke the formation of a conspiracy theory with some people? Cognitive psychology is based upon the idea that people perceive and process information.
- Sometimes, believers in CTs are regarded as *paranoid* (with the article by Hofstadter, 1964, on *The paranoid style in American politics* as a famous example of using this term). When a term of psychiatry is used, the viewpoint of clinical psychology might help us to determine if such a categorization is justified.
- Millions of people have been humiliated, persecuted, tortured and died under ideologies with conspiracy theories as central narratives. Adolf Hitler (1936, p.135) wrote in *Mein Kampf*: “. . . zwischen allem aber als ewiger Spaltpilz der Menschheit – Juden und wieder Juden [between all, as eternal fission fungus—Jews and Jews, ever and anon]”. Hitler drew upon a conspiracy theory that had been cultivated in Germany for many hundred years (Wippermann, 2007), depicting Jews as a callous, greedy and evil people not stopping for murder. At the latest since Stanley Milgram’s experiments in 1961, (experimental) psychology tries to fathom what turns ordinary men into ruthless villains torturing and killing for ideas like the Nazi ideology.
- All these interesting and sometimes horrendous features of conspiracy theories—and the desiderata for psychological research—, however, beg a question that transcends psychology: What can we know about the world? How might we handle uncertainties and imperfections, in a way that is scientifically sound. And how do we handle a topic that has played its part in the worst crimes against humanity (with the persecution and murder of Jewish people) and at the same time asks us to defend liberty, trust and human rights (against espionage beyond democratic control)? Those epistemic questions touch on fundamental questions of our existence and should be examined from the viewpoint of philosophy.

In sum: The study of CTs might be regarded a burning glass of psychology. Many aspects and disciplines can contribute to a research question that comprises perception, cognition, emotion and motivation. War and peace, freedom and slavery, ignorance and strength—the dystopia *Nineteen Eighty-Four* by George Orwell (1949/1989) gives a picture what society might look like when the conspiracy theory of total surveillance and control would become reality—that is the dark side of conspiracy. However, even the lighter aspect, the entertainment by and with conspiracy theories, is not without danger. Aldous Huxley (1932/2005) also envisioned a society that is controlled by a few. But here, total surveillance is not necessary. People are too consumed by entertainment, sex and drugs to think of anything else.

Conspiracy and totalitarianism have been a part of highbrow as well as popular culture for hundreds of years, be it Shakespeare, Orwell, Huxley or Martin. It is a task for psychology to contribute to research on conspiracy theories, together with philosophers, communication scientists and historians, to understand the power, the magic and also the danger of this narrative.

## 1.2 Advance organizer

Conspiracy theories can be considered a full-fledged research program. This thesis will try to make a contribution. First, in chapter 2 I will define *conspiracy theory* and give a short account of the phenomenon's philosophical ramifications and its epistemic qualities. Then, drawing on the article

Raab, M. H., Ortlieb, S., Auer, N., Guthmann, K., & Carbon, C. C. (2013). Thirty shades of truth: conspiracy theories as stories of individuation, not of pathological delusion. *Frontiers in Psychology*, 4. doi:10.3389/fpsyg.2013.00406

(full article in section A.1 on page 74)

in section 3 I will introduce a new means of measuring the belief in conspiracy theories—*narrative construction*—that accounts for the diversity of such beliefs, and that tries to simulate the process of acquiring information with regard to a controversial topic under controlled conditions—using the 9/11 attacks as an example (Grasping dynamic cognitive-emotional processes is a methodological problem that is not unique to CTs; it is discussed for *user experience* (UX) in Raab, Muth, and Carbon, 2013, reprinted here

in section [A.2](#) on page [83](#); and for aesthetics in Muth, Raab, and Carbon, [2015](#)). Here, I will also discuss possible psychological functions of the belief in conspiracy theories.

Using this method of narrative construction, I will (in section [4](#)) show that extreme information often found in conspiracy theories is dangerous, as the recipient’s opinion might get shifted towards a more extreme narration—without him noticing this shift, which is probably due to adaptation. The publication

Raab, M. H., Auer, N., Ortlieb, S. A., & Carbon, C. C. (2013). The Sarrazin effect: the presence of absurd statements in conspiracy theories makes canonical information less plausible. *Frontiers in Psychology*, *4*. doi:10.3389/fpsyg.2013.00453

(full article in section [A.3](#) on page [92](#))

discusses these findings with respect to one of Germany’s most controversial books of recent years, *Deutschland schafft sich ab [Germany is abolishing itself]* by Thilo Sarrazin ([2010](#)).

In the mentioned articles, I argue that conspiracy theories should be regarded as narrations that, as kind of a *mental simulation*, help us to better understand ourselves and our complex, social world. I will engross these thoughts in section [5](#).

To better understand why different people hold different conspiratorial beliefs, the psychological concept of personal values (for an overview, see Schwartz, [2012](#)) was applied to conspiracy theories in an experimental setting. In the conference paper

Raab, M. H., Kammerl, B., & Carbon, C. C. (2015, March). *Conspiracy belief and personal beliefs—exploring the linkage between a person’s value system and the tendency for conspiracy beliefs*. Paper presented at the Conference on Conspiracy Theories, Miami, FL

(full paper in section [A.4](#) on page [100](#))

in section [6](#), I will discuss why this concept might be a worthwhile extension of existing research on individual differences and the belief in CTs. Personality psychology examines why some people are more prone to assume a conspiracy behind a given event. I will focus here on the question if and how the ‘group of conspirers’ voluntarily included in a person’s conspiratorial narration for a given event relates to the person’s personal beliefs.

Most research on CTs is concerned with beliefs people already hold, as it is hard to pinpoint when and why someone will generate a *new* conspiratorial explanation. When

the scandal about corruption and bribery in the Fédération Internationale de Football Association (FIFA), revealed by the US Department of Justice, was hitting the front pages in 2015, we took the chance of immediately running two studies, confronting participants with different versions of newspaper-styled information. In

Gebauer, F., Raab, M. H., & Carbon, C. C. (2016). Conspiracy formation is in the detail: on the interaction of conspiratorial predispositions and semantical cues. *Manuscript under revision*

(final manuscript in section [A.5](#) on page [113](#))

we were thus able to examine which aspects of information regarding the role of the United States (varying direct and indirect agency; and purposeful and non-purposeful agency) made it more likely that someone will spontaneously assume hidden intentions by the US—here, to discredit the FIFA World Cup 2018 to harm Russia. This manuscript is discussed in section [7](#).

To demonstrate the importance of a balanced and scientifically thorough examination of conspiracy theories for our society, I will sketch a popular-science book project that is currently work in progress (working title: *In the beginning there was the conspiracy theory*) in section [8](#). For a phenomenon so pervasive and omnipresent like conspiracy theories, science has a duty to make its findings available to a larger audience. The book is scheduled to be released in spring 2017 by Springer Verlag (excerpt in section [A.6](#) on page [138](#)) and targets interested laymen. The book will also include a construction kit for conspiracy theories, as sketched in section [9](#).

Finally, in section [10](#) I will discuss benefits and challenges from a general viewpoint. I will integrate thoughts on opportunities and dangers for a democratic, *open society* with respect to conspiracy theories.

## 2 On the nature of conspiracy theory

Today we are engaged  
in a final, all-out  
battle between  
communistic atheism  
and Christianity.

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(Joseph McCarthy, 1950)

**K**ARL R. Popper (1958/1980) has introduced the term *conspiracy theory of society*. He considered it the belief that the explanation for a given social phenomenon can be made by disclosing the people and groups being interested in the phenomenon's incidence (and which had made plans accordingly). He saw secularization as the main reason for this widespread belief. With the gods being abolished, powerful men and groups had to step in. While Popper acknowledged that real conspiracies do happen, he claimed that in reality, conspirators will fail to accomplish their goals in most cases—because they, too, face unforeseen repercussions of their own deeds.

Popper attacked the idea that there is a manifest truth, and that this truth would be recognized once discovered, to attack Marxism: “The conspiracy theory of ignorance is fairly well known in its Marxian form as a conspiracy of a capitalist press that perverts and suppresses truth [...]” (Popper, 1976, p.7) He considered this kind of belief “the almost inevitable consequence of the optimistic belief that truth, and therefore goodness, must prevail if only truth is given a fair chance” (Popper, 1976, p.7f).

So Popper gives us a *definition* (a belief in people who plot in secret to achieve their plans), the primary *cause* for this belief (the abolishment of gods) and also a psychological  *motive* (the belief that truth and goodness will prevail in the end). While he clearly identifies conspiracy theories as an epistemic pitfall, the impetus assumed here is not a bad one: the belief in goodness and truth.

Things are different for Hofstadter (1964). He has spotted a conspiracy belief, not among the leftist but among right-wing politicians he calls “paranoid”, where the imagined (and usually Communist) enemy is “a perfect model of malice, a kind of amoral superman—sinister, ubiquitous, powerful, cruel, sensual, luxury-loving.” (p.85) Hofstadter speculated that a projection of ideal as well as unacceptable aspects of the self might be behind this. Another important cause for developing such a mindset: being separated from political participation. “Having no access to political bargaining or the

making of decisions, they find their original conception that the world of power is sinister and malicious fully confirmed.” (Hofstadter, 1964, p.86)

Those two approaches—early approaches with regard to research in this subject matter—have anchored the debate. The one assumes a naive and all-too-simple belief in goodness and truth within the *believer*; the other one insinuates a paranoid imagination and an exaggeration of an omnipotent enemy. This section will give an account what constitutes a conspiracy theory; and how we should deal with them from an epistemic-philosophical point of view “between the intellectual vices of *paranoia* and *naivety*” (Coady, 2006a, p.126, emphasis in original).

## 2.1 Defining the phenomenon

Many attempts to define the term *conspiracy theory* since Popper (1958/1980) are closely related to a lexical definition. They take the meaning of *conspiracy* as a “secret plot of two or more people” and extend it. According to Douglas and Sutton (2008, p.211), a CT sees “the ultimate cause of an event (usually one that is political or social) as a secret plot by a covert alliance of powerful individuals or organizations, rather than as an overt activity or natural occurrence.”

Other scholars focus on the historical dimension. In their view, a constitutive feature is an underlying event:

A conspiracy theory is a proposed explanation of an historical event in which conspiracy (i.e. agents acting secretly in concert) has a significant causal role. Furthermore, the conspiracy postulated by the proposed explanation must be a conspiracy to bring about the historical event which it purports to explain. Finally, the proposed explanation must conflict with an ‘official’ explanation of the same historical event. (Coady, 2006a, p.117)

Here, Coady (2006a) mentions that usually an official explanation for the said event exists that conflicts with the conspiracy theory. That point is also stressed by Keeley (2006) who has introduced the term *unwarranted conspiracy theories* (UCTs). He uses this expression to draw a line between conspiratorial explanations that are warranted (like Watergate), and the unwarranted ones that in the end lead to a “nihilistic degree of skepticism” (p.59). The latter he deems dangerous, as trust in the public, the fact-gathering institutions and the individuals working for them would erode.



## On the nature of conspiracy theory

Keeley (2006) defines unwarranted conspiracy theories as: running counter to some official or obvious account; assuming hidden, nefarious intentions; tying together seemingly unrelated events; with well-guarded secrets; and making use of errant data (that is, explaining accounts that are not explained in or even contradicting the official account). In other words: A theory that explains too much should make us suspicious.

Douglas and Sutton (2008, p.211) state that a conspiracy theory is the assumption of “a secret plot by a covert alliance of powerful individuals or organizations, rather than [...] an overt activity or natural occurrence”. The assumption of bad intentions on the side of the conspirators is stressed in the definition by Brotherton and French (2014, p.238) with the “unverified and relatively implausible allegation of conspiracy, claiming that significant events are the result of a secret plot carried out by a preternaturally sinister and powerful group of people”.

This multitude of definitions, beginning with Popper (1958/1980), has led Jolley (2013, p.60) to the diagnosis: “Conspiracy theories can be defined in a variety of ways, and it appears each scholar refers to their own definition.”

The bottom line is: A conspiracy theory is a theory about a conspiracy. And with a *theory*, we are likely to expect explanations for—or at least more or less founded speculations about—the relationships of some things. However, the term *conspiracy theory* is not an academic definition, and consequently *theory* here bears the layman notion of a speculative account; and not necessarily the scientific notion of a mesh of related assertions backed up by evidence. The following subsection will use philosophical accounts to determine whether the epistemic qualities of such theories imply some special treatment of CTs.

## 2.2 The philosophical debate

The *conspiracy theory of society* has been described and decried by Popper (1958/1980). Popper’s critique, however, was also regarded as an “intellectually respectable smoke-screen behind which [right-wing conspirators] can conceal their conspiratorial machinations” (Pigden, 2006b, p.18). It is this *conspiracy theory of society* that Pigden (2006b) rejects as absurd, because necessary beliefs for adhering to it would be: believing that *all* societal chance is brought about by conspiracy, that finding conspirators is the endpoint of investigation, and that conspirators always get what they want. Such an extreme belief would probably not be upheld even by hardcore CT believers.



## *On the nature of conspiracy theory*

But what would be a reasonable way to deal with conspiracy theories? Reason is one of the most important topics and tools of philosophy. Do conspiracy theories exhibit epistemic qualities that might allow for some general rules—or, at least, heuristics—to deal with the phenomenon?

Illies (2015), discussing the legitimation for a universal system of morale, demands for any reasonable request that it is clear, internally consistent, and that performance of said request does not hinder other people from performing likewise. There are two *general* rules we can think of when dealing with conspiracy theories:

**General Acceptance:** You should accept any conspiracy theory, that is: believe any set of statements that assumes hidden and possibly nefarious deeds by a group of people.

**General Rejection:** You should dismiss any conspiracy theory, that is: reject any set of statements that assumes hidden and possibly nefarious deeds by a group of people.

Both rules are clear, internally consistent, and can be executed by anyone. However, there is a third requirement that Illies (2015) calls *evolutionary universalizability*. The rule should, when embedded in a larger set of rules like a system of morale, stabilize the system. If it would allow for competing models to emerge and get selected, it is not evolutionary stable. Selection rules would be rules advancing a society where freedom of judgement, the freedom to do what is right, and mutual respect are always given—pretty much what Popper (1958/1980) would call an open society.

Both of the general rules fail to meet this demand. Accepting every conspiracy theory is obviously not reasonable: That would deny the freedom of individual judgement when being confronted with new information. Lies would be able to spread without checks and balances then.

The general rejection is not so straightforward. Embedded in a larger set of morale, there are things we should *not do* in any case, no matter the circumstances: murder, torture, and sexual abuse for instance are not permissible, as they negate the victim's basic freedoms and would destroy essential mutual trust in society. Would the belief in conspiracy theories be of such an unambiguous quality to justify a general rejection?

As long as there is even the faintest possibility that two or more people might conspire to secretly benefit at the expense of others, the answer is *no!* If a real conspiracy is a possibility, an open society must have means to deal with it. Organized crime we

## On the nature of conspiracy theory

clearly should not tolerate. Public authorities bound by law that engage in investigations to stop such criminal conspiracies are part of any democratic society.

The consequence would be: to assess any conspiracy theory by content, individually. A general rejection would, as well as a general acceptance, not support a stable, open society.

Yet, an often-heard objection reason why we should refrain from doing so is: Conspiracy theories are unfalsifiable (Heins, 2007; M. J. Wood, Douglas, & Sutton, 2012; Grimes, 2016). For instance, when somebody claims the HI virus was designed in a Soviet lab (or an American lab, depending on the theory), this claim would be impossible to refute<sup>2</sup>; and any theory offering no criteria for falsification would be worthless. Keeley (2006) and Basham (2006) object, arguing that such a requirement would preclude initial inquiries into any presumed conspiracy. Furthermore, falsifiability would be a criterion of natural sciences, not of political discourse; so the question of falsifiability should not be made a global argument against any CT.

What these authors do not note: The claim that an arbitrary conspiracy exists can, from an epistemic viewpoint, *never* be falsified. It is an existential proposition ( $\exists$ ), and as such it can only be *verified*. To falsify the claim that the US government has seized data from *reddit* to derive psychological profiles would require: to get hold of absolutely all governmental plans, decisions, datasets, ... in order to judge if such user/ citizen profiles are rendered. That is not possible *in principle*, as there is no epistemic safe way to recognize if and when all necessary information to reach a decision is available. That is a feature of all existential propositions and not an exclusive property of CTs.

Only the very broad conspiracy theories— making universal propositions ( $\forall$ ) like “every government member in every country is essentially a reptile in human disguise”— could *in principle* be falsified, by crucially inspecting a politician’s body immediately *post mortem* (and before his reptile colleagues were able to exchange the body with a human cadaver). That is not a realistic scenario, but again, that is not an exclusive problem of conspiracy theories. There are many theories, for instance in physics, neurobiology, and economics, we cannot falsify in the classical sense, as we lack (at the moment) the devices of measurement.

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<sup>2</sup>One could imagine to find evidence that the virus was already present in, say, stuffed primates from the 19th century. However, this would not exclude the possibility that said evidence is forged, that the HI virus was designed independently, or that the Soviets took the primate virus DNA as a blueprint for a much deadlier variant.

## *On the nature of conspiracy theory*

In applied sciences as well as in everyday life we have to resort to indicators that make a given assumption more or less *likely*. This is no strong verification or falsification in an epistemic sense, and consequentially we can not derive conclusions that make the assumption in question *definitely* true or untrue. If we should happen to meet the Queen of England on a skiing holiday, this would be a strong indicator that she is not a reptile (comparable to reptiles we usually meet on earth), as she would have to be stiff as a stick then. But maybe she wears heating gear, or her reptile body has adapted to earthly climate?

So falsifiability is not a demand we should make when confronted with a conspiracy theory. We can try to find indicators by deriving secondary assumptions or by inferring necessary premises for a conspiracy claim, but that does not give us the absolute certitude we may have hoped for. That holds for conspiracy theories, as it does hold for most assumptions and theories in everyday life and in science.

Another argument for a general rejection of CTs is that real conspiracies are very unlikely, as they would blow up soon. Grimes (2016) postulates a mathematical model to predict how soon—on average—a conspiracy will get publicly known given a number of insiders. He derives the parameters of his model by accounting for the time real conspiracies were able to stay hidden. For example, he takes 30,000 NSA employees as “maximum involved” (Grimes, 2016, p.7) in the PRISM program (one of the NSA spy programs), with a time of six years from the start of PRISM to its uncovering by Edward Snowden. The model then predicts that a suppressed cancer cure would get public after roughly three years (assuming over 700,000 insiders, that is, all employees of all pharma companies). Likewise, a faked moon landing (with over 400,000 NASA employees involved) would have blown up after 3.68 years.

These model parameters are questionable at least. 30,000 NSA employees, that means: no staff fluctuation, no foreign agencies involved, no other government agencies involved, no subcontractors and third-party companies, no overlapping with other NSA programs, and no precursors or plans before the PRISM start five to six years before Snowden. 700,000 employees of big pharma means, on the other hand: Everybody working there would be an insider in knowledge of a suppressed cancer cure, from the plant service technician over marketing and accounting staff up to the CEO.

Furthermore, Grimes (2016) underestimates the secrecy a hierarchical organization is capable of. Indeed, the extremely hierarchical nature of institutions and companies leads Basham (2006) to assume that a global malevolent conspiracy is possible. Yet, fear and threat, as assumed by Basham (2006), are not necessarily the most important factors. As long as all members of a conspiracy are convinced to act morally right,

no one involved is likely to bail out. It were ethical reasons, after all, that Edward Snowden gave as motive: “I don’t want to live in a society that does these sort of things.” (MacAskill, 2013) Other conspiracies were able to keep hidden much longer. In documents of *Operation Moongoose* (that was just a part of US efforts to overthrow Fidel Castro in Cuba in the 1960s, so it seems not exaggerated to assume thousands of people involved in the government, the military, in three-letter agencies, and among Cuban exiles supporting the US) written-down suggestions circulated, for example by the US Joint Chiefs of Staffs: “We could blow up a US ship in Guantanamo Bay and blame Cuba” (Elliston, 2002, p.93). These strategies were made public 35 years later, not leaked by a whistleblower, but by journalistic effort that accomplished the de-classification of those documents under the US Freedom of Information Act (that allows appellations to the US federal government in order to get secret documents de-classified).

## 2.3 A pragmatic resolution

Pigden (2006a) sums up the epistemic debate that “the idea that conspiracy theories as such are somehow intellectually suspect is a superstitious or irrational belief” (p.165), and also a dangerous one, as it might protect the lies of criminals. Without a general rule to treat conspiracy theories, and the abundance of ‘real’ conspiracies throughout history, the “issue before us is one of *degree* [...] between the trusting and distrusting background theories of our civilization” (Basham, 2006, p.99, emphasis in original).

As researchers, we have to be aware of a fallacy that might misguide our reasoning: We should not conflate the irrationality of some conspiracy theories (for Germany, the books by Jan van Helsing alias Jan Udo Holey come to mind<sup>3</sup>) or the irrationality exhibited by some prominent characters like David Vaughan Icke<sup>4</sup> with the phenomenon in general (a point made by Dentith, 2014). While these are important psychological aspects, they are but a part of a larger and more ambiguous phenomenon.

In the view of Clarke (2002, p.91), conspiracy theorizing has its benefits, too: It “challenges us to improve our social explanations”, it “occasionally identifies a genuine

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<sup>3</sup>Jan Udo Holey writes about flying saucers built by ‘Third Reich’ engineers, Atlantis, and many more off-wall topics, for example in van Helsing, 1995a, 1995b, 2010. Already in 1996, his book sales had exceeded 100,000 copies, see Benz (2009).

<sup>4</sup>David Vaughan Icke spreads the idea that important world leaders are reptilian humanoids. He has claimed in interviews to be the “Son of God”, documented for instance here: <https://www.youtube.com/watch?v=BiyrHZCksDM>. Icke’s theories are analysed in Barkun (2003).

## *On the nature of conspiracy theory*

conspiracy” and it “helps to maintain openness in society”. This leaves us with a guideline that is on the one hand startling, given the extensive debate going on for decades; but on the other hand evident and simple:

[C]laims of conspiracy should not be seen as facing a higher burden of proof than other explanations of complex, social processes.[...] [M]any of the suspicions we have about conspiracy theories are part of a set of worries we should have about explanations *in general*. [...] [I]f someone has an argument for some claim, then we should assess that argument. It does not matter whether it is a radical claim about String Theory or the claim that the president’s backtracking on taxing the super-rich was due to the behind-the-scenes machinations of the Illuminati; if an argument has been put forward, we should look at it if we are going to pass judgement. (Dentith, 2014, p.171pp)

This conclusion by Dentith (2014) is an incentive to explore the phenomenon theoretically and empirically. It points out that CTs are complex beliefs about complex social processes that must not be dismissed in general. We should develop new methods, regarding the dangers as well as the benefits of conspiracy theories, and should take a closer look at the cognitive processes associated with the belief in such theories.

In the following section, I will discuss the article *Thirty shades of truth* by Raab, Ortlieb, et al. (2013). It will introduce a new method to assess conspiracy theories; and it will discuss that CTs might be, for the believer, a means to better understand the world *and* oneself.

### 3 Article: Thirty shades of truth

I've set the bar quite  
high in terms of  
storytelling.

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(E.L. James, author of  
*Fifty Shades of Grey*)

**W**ELL SAY, WHAT'S YOUR TAKE ON CONSPIRACY THEORIES? When we set out for the article “Thirty shades of truth: conspiracy theories as stories of individuation, not of pathological delusion,” there was no generally accepted measure for the *Gretchenfrage* of conspiracy theories. So we developed a measure.

**Motivation** We were aiming to develop a method that goes beyond a standard questionnaire. In Raab, Muth, and Carbon (2013) we have argued, for the domains of aesthetics and *user experience* (UX), that questionnaires often do not live up to the dynamic qualities of our cognitive and emotional processes. And when it comes to design evaluation, for example, the responsible cognitive-affective processes might run ‘in the background’ of our minds over several months (without coming to a final conclusion at all).

Presumably, generating and elaborating a conspiratorial belief is not something that happens once and at a definite point in time. We might compare it to the evaluation process taking place for, say, the all-new *BMW i* series. Once in a while, we might read about the new BMW models in a newspaper or magazine; at times, we discuss electro mobility with our friends; and every now and then, we might encounter an *i3* or even an *i8* on the streets.

Reading, discussing, seeing evidence—and, all along, forming an opinion: Grasping the dynamics of such cognitive-emotional processes is a demanding task for psychology. This holds for design appreciation, and it holds for conspiracy theories, too.

**Theory and method**<sup>5</sup> We were inspired by card-based methods like the *Q-Sort* (see, for instance, Brown, 1996) and by the *repeated evaluation technique* (RET; Carbon and

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<sup>5</sup>Further details regarding theory, method and results can be found in the respective parts of the full article reproduced in Section A.1

Leder, 2005). The goal was to simulate the process of a) acquiring information concerning an important event and b) the sense-making regarding that event in a controlled environment, with controlled information, in a short, manageable time-span.

We developed a technique that tried to balance restrictions (regarding available information) and freedom (regarding the handling of information) and have called it *narrative construction*. The preparation for an experiment:

- Information about an event (in our case 9/11) is **compiled** from real-world sources (like web sites).
- Information fragments are **reduced** to short (one to three sentence) statements.
- The information is **selected** to cover pre-defined categories (in our case, ingredients of conspiracy theories: *odd event, evidence, non-transparency, publicity, group of conspirers, myth*). These categories can be thought of as ranks in a card game.
- Within each category, information is **graded**, so that there are different shades of information—comparable to colours in a suit of playing cards. We used three shades/ colours, referring to the conspiracy classification by Ganser (2006) and applying it to our 9/11 scenario: official story (officials were surprised by the al-Qaeda attack), *Let it Happen on Purpose* (LiHoP; the officials knew beforehand of al-Qaeda’s plans but did not step in) and *Make it Happen on Purpose* (MiHoP; the officials themselves were behind the attack).
- The information is **written** on cards, ensuring that there are only complete sets of shades/ colours (in our example, triplets), and that there is at least one set for each category.

Participants are given the resulting card set and are asked to construct “a most plausible story for the event”, without time restriction. People then can elaborate the information and include these statements (=cards) into their personal narration they deem most plausible. They are asked to lay out the resulting story.

By looking at the categories that were used, we can infer which aspects are most important for people’s stories. By counting and comparing from which shade/ colour information was used, we can infer to what extent a story can be regarded a *conspiracy* theory.

In our study, 30 participants were asked to construct a 9/11 narration. As we wanted to address an additional research question (that is described in the next section), 15 participants received the *official* and the *LiHoP* cards, and 15 additional participants

(all students from the University of Bamberg, naïve to the study’s aims and receiving course credit for participation) received the *official*, the *LiHoP* and the *MiHoP* cards

**Results** Constructing a conspiratorial narration as most plausible explanation for 9/11 was not a fringe phenomenon. Indeed, when using a (deliberate) threshold that a non-conspiratorial theory does contain less than 33 percent of conspiratorial (LiHoP and MiHoP) parts, only five out of 30 resulting theories were *not* a conspiracy theory.

**Discussion** Usually, the belief in a conspiratorial explanation is considered a deviation from ‘normal’ reasoning. For example, conspiracy theories are thought to establish sense-making when threatening events occur (Franks, Bangerter, & Bauer, 2013), as a kind of sense-making that is related to political extremism (van Prooijen, Krouwel, & Pollet, 2015), especially when emotions that reduce control were experienced, regardless of the emotion’s valence (Whitson, Galinsky, & Kay, 2015).

Our findings suggest that constructing a conspiracy theory as most plausible explanation for one of recent history’s most important event is the normal case—and generating an ‘official explanation’ the deviation. This does not imply a normative assessment—it would be highly dependent on event and CT content whether a given conspiracy theory should make us worry—, but we should consider the possibility that assuming hidden and possibly nefarious causes is *the* standard narrative.

In the article, we consequently discuss the option that story-telling regarding important events, as prominently elaborated by McAdams (1993), in general tends to be a conspiracy theory rather than a non-conspiratorial account. We draw, for example, on Bischof (1996) and argue that the discovery of agency and knowledge is a narrative that most people in Western societies personally experience in puberty. Coming of age usually is a struggle against adversary forces, namely parents and established society. To eke out agency, against resistance, might be a narrative at the core of our self. And consequently, narrations for events of personal relevance might be shaped regarding to this narrative.

**Critical appraisal** The method we have developed—called *narrative construction*—tries to condense a complex cognitive and emotional process. It offers much more degrees of freedom than a standard questionnaire, as it allows for active elaboration of information. Participants can connect assertions and form temporal and causal relations between statements. At the same time, the cards restrict participants to pre-defined



categories and shades. In contrast to an interview, it is much more easy to evaluate and compare the results between subjects.

Of great importance is the compilation of information that goes into the cards' statements. Should that information be skewed, the results might suffer. To better assess reliability and validity of the method, additional tests should be run.

However, the evaluation of such quality factors would depend on some kind of standard that our measure can be compared to. In parallel to our article, Bruder, Haffke, Neave, Nouripanah, and Imhoff (2013) and Brotherton, French, and Pickering (2013) have developed and published CT questionnaires.

In the best case, these questionnaires can provide valuable insights on people's general tendency to believe in conspiracy theories, that is, the people's *trait*; and the method of narrative construction will help us to understand how individuals perform, how they process and produce CTs for a given event—that is, we would measure the *state*.

Narrative construction should not be the only method to explore conspiracy theories. Yet, it can be a valuable addition to a *toolbox* that also contains questionnaires, guidelines for interviews, and—extremely important for this topic—standards and procedures for assessing documents (like website). Like in the science of aesthetics, a multifaceted phenomenon is best explored with a mix of methods.

With the possibility to vary the *shades of information* that are available to a participant, we took a closer look at a feature of some conspiracy theories that is striking and uncanny at the same time: What happens when extreme information—in our case, information indicating that 9/11 was an *inside job* by the US government—is available?

## 4 Article: The Sarrazin effect

O believers, if an  
evildoer comes to you  
with some news, verify  
it (investigate to  
ascertain the truth),  
lest you should harm  
others unwittingly and  
then regret what you  
have done.

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(*Surah 49. Al-Hujurat, Ayah 6*)

**I**T is not wise to dismiss conspiracy theories *per se*. Yet, CTs can be dangerous. Lies and misinformation might be embedded in any communication, but with the allegation to *hidden* actors and *secret* information, it is easy to transport—deliberately or by negligence—wrong information. It is in the nature of a conspiracy (theory) that validation of the claims is hard.

One of histories most detrimental conspiracy theories, traced through the centuries by Wippermann (2007), and among others discussed by von Bieberstein (1976), by Groh (1987), by Billig (1987) and by Soyer (2014), with recent empirical work e.g. by Grzesiak-Feldman and Irzycka (2009), is the theory about Jews striving for (secret) global dominance by controlling money, by instigating wars, and by spreading lies in the media.

Maybe the most disturbing artefact of anti-Semitic conspiracy theory is a book called *The Protocols of the Elders of Zion* (in America published by Henry Ford, in Germany by Fritsch, 1924). It first began to circulate at the beginning of the 20th century in the Russian Empire. The text is essentially a manual how to subjugate the people to achieve world dominance and was at that time attributed to a secret committee of influential Zionists. The text was debunked as a forgery already in the 1930s (e.g., see Hagemester, 2001).

The anti-Semitic agitation in these *Protocols* is one aspect. Additionally, as Wippermann (2007) notes with reference to Hannah Arendt, the ideas in this ‘manual to world domination’ were implemented by Hitler as well as by Stalin: aggressive propaganda, a policy of full employment, taxes based on possession, and “even the ‘central court of audit’ already mentioned in the ‘protocols’ was not lacking” (Wippermann,

2007, p.71). The anti-Semitic conspiracy narrative has come full circle here: agitation imputing a secret plot by Jews, with a plot so efficient that it could be used as a blueprint by anti-Semitic ideology.

A conspiracy theory as a medium to carry agitation, with disguising the dubiousness of the information by referring to secret sources: There is a danger to such theories that must be regarded. Would people recognize extreme information as such; or would off-wall statements just get absorbed in the process of constructing a narration?

**Motivation** The article Raab, Auer, et al. (2013) (Appendix A.3 on page 92) was set out to explore what happens when extreme statements are made available to people in a constructive-narrative process. The question had become topical with the book *Deutschland schafft sich ab [Germany is abolishing itself]* by Thilo Sarrazin (2010). Highly successful in sales, the book sketched a theory of Muslims infiltrating the German people. It included highly controversial statements about a supposed higher fertility of Muslims, and about Jews having a considerably higher *IQ* than other people. We wanted to explore what happens to the stories people generate about an important event when extreme, debatable information is present in the narrative-constructive process.

Neil Postman (1993) warns us about *Technopoly*, a society where technology is not only used any more by society, but where society is *shaped* by technology. The “continued and uncontrolled production and dissemination” (p.71) of information would result in tries to “employ technology itself as a means of providing clear direction and humane purpose” (p.72). This is a result of institutions like the state and religion losing influence. Their demise is a demise of information filters, too; and successors like *science* have no answers to questions on ethics. Conspiracy theories then might be like a filter system that tells us which sources should be regarded at all, also in terms of morality. The way people filter the information that is present could be used to learn more about the people; and also about how conspiratorial story-telling works.

**Method**<sup>6</sup> Using the approach of narrative construction in Raab, Ortlieb, et al. (2013), we evenly and randomly assigned 30 students (26 female,  $M_{age} = 22.4$  years, range: 19–55 years) of the University of Bamberg (naïve to the aim of the study) to either the (1) modest contents group or (2) extreme contents group.

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<sup>6</sup>Further details regarding theory, method and results can be found in the respective parts of the full article reproduced in Section A.3

The *modest group* participants received 29 cards with information fragments regarding 9/11 (from the categories *odd event*, *evidence*, *non-transparency*, *publicity*, *group of conspirators*, and *myth*). The statements all were compiled from online sources and were 13 official accounts with respect to 9/11, and 13 indicated a moderate conspiracy (a *LiHoP* conspiracy in the sense of Ganser, 2006, were the US administration was not responsible for the attacks, but knew of al-Qaeda’s plans and did nothing to stop them).

The *extreme contents group* got all these cards and additionally 13 cards with extreme conspiratorial items. These items were *MiHoP* in the sense of Ganser (2006), with an US government that has planned and executed 9/11.

All participants were asked to “construct a plausible story of the events of September 11th 2001, as a single coherent story or consisting of coherent or controversial fragments,” without time restrictions. When the participant had indicated the story complete, the chosen items were written down. The participant was then asked to rate “how plausible the 9/11 story version just laid out is” on a five-point Likert scale (among other questions related to other hypotheses). Participants took between eight and well over 30 minutes to construct the story (with 21 minutes on average).

**Results** For each participant, we summed up the items he/ she had chosen from each conspiracy-category (official, LiHoP, MiHoP). Using a one-way Analysis of Variance (ANOVA), we tested whether the number of items selected from the official as well as from the LiHoP item pool differed between the two groups. The difference in the number of official items selected was significant,  $F(1,28)=6.92$ ,  $p=.0137$ ,  $\eta_p^2=.198$ , with  $M=7.7$  ( $SD=2.6$ ) for the official and  $M=4.9$  ( $SD=3.2$ ) for the LiHoP items. We found no difference in the number of selected limited conspiratorial items,  $F(1,28)<1$ ,  $p=.9537$ , *n.s.* We found no difference in the self-perceived story plausibility (for group 1  $M=3.8$ ,  $SD=.9$ , for group 2  $M=4.0$ ,  $SD=.5$ ;  $F(1,28)=.58$ ,  $p=.45$ , *n.s.*).

**Discussion** Including rather extreme statements in a story for sure grants public awareness. Strong opposition is a form of attention, too, and we can safely assert that Thilo Sarrazin was successful in starting a debate, and in fuelling it over the course of several months.

Additionally, we could show that in principle the kind of mixture of information Sarrazin has provided—comprising official facts and figures, speculations about a danger

for the German people, and rather off-wall ideas, for example about a Jewish IQ gene—can be dangerous. When people actively construct a story, that is, an account with temporal and causal relations tying together pieces of information, they tend to use all the information available.

In our study, this came at a price: official accounts regarding 9/11 were chosen significantly less often, not only relative to LiHoP information, but also in absolute terms. When ‘facts’ from the extreme end of the spectrum enter the stage, moderate facts get dropped. In terms of self-perceived story plausibility, there was no difference.

**Critical appraisal** The rather small sample and the focus on 9/11 require further studies for a generalization. One would have to assert what the effects would be for very emotional content (e.g., some very recent catastrophe in the own country), for very boring content (say, family trees of farmers in the Tundra), for information where participants have a very high expertise, and so on.

However, while the study’s results are quite manifest in hindsight, there would have been other possible outcomes. For instance, participants might have just ignored the more extreme facts; they even might have acted in defiance, choosing more official and less LiHoP items when extreme views are present. Another option for them would have been to include extreme views without dropping official data.

Yet, people adopted to the information and shifted their stories. In a small and controlled setting, we have shown what might happen when extreme and even rather off-wall voices enter a debate: the official, factual accounts might just get lost. Confronted with, say, *The Protocols of the Elders of Zion*, people might forget about basic and true assertions about Jewish history first.

Our method tries to bring a small-scale model of active information acquisition to the laboratory. It resembles the acquisition process for facts and opinions people engage in when they are, for example, browsing the web. Maybe the most important difference: In reality, people engage again and again in information-seeking behaviour for a topic they deem relevant. Over time, the mechanism we have isolated might explain why some people believe in reptile aliens leading the world—because their narration has shifted over time.

**The slippery slope** The argument by Keeley (2006) that conspiracy theories are a *slippery slope* and erode public trust is compatible with empirical findings that essentially

say: If you believe in one conspiracy theory, then you are likely to believe in many other as well (Goertzel, 1994; Lewandowsky, Oberauer, & Gignac, 2013). At the same time, belief in CTs is associated with low levels of trust and a feeling of powerlessness (Goertzel, 1994; Abalakina-Paap, Stephan, Craig, & Gregory, 1999; Wagner-Egger & Bangerter, 2007; M. J. Wood & Douglas, 2013). Due to the correlative nature of these studies, it cannot be ascertained if conspiracy belief leads to distrust; vice versa; if both are mediated by a third factor; or if distrust and CT belief interact in a positive reinforcement loop, a vicious circle.

We have shown that the slope is indeed slippery. And that people do not necessarily notice when they are slipping. With an experimental manipulation of the available information, we have demonstrated the first step, the engagement in a process that might become a vicious circle of opinion-shifting and distrust.

When our experiment took place, the 9/11 events were over a decade old. Participants will inevitably know a good deal about the event, about possible conspiracy theories, about solid facts, speculations and open questions. That, however, is a problem most studies about CTs face: Either you include a real-world conspiracy and accept that participants have prior knowledge; or you include a fictitious story, accepting the possibility that this story lacks some characteristics a *real* conspiracy theory has.

After considerations on the power of narrations in section 5, I will present a study in section 6 that uses a fictitious scenario to determine the role of personal values in conspiracy belief formation.

In section 7, a study is presented that tries to overcome the limitations of existing and fictitious conspiracy scenarios. It took the opportunity to explore which kind of information might lead people to assume (or to reject) a conspiracy—for information where no conspiratorial narrative was present so far. The study was conducted in 2015 right when it became public that the USA have arrested FIFA officials for bribery, and consequently the FIFA world cup in Russia 2018 was at stake.

## 5 The narrative power of conspiracy theories

They sat silently  
(for a while),  
tight-lipped.  
(Finally they spoke)  
Will no (other)  
god come forward?  
Is [fate] fixed?

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(Enūma Elis<sup>v</sup>)

**R**ESearchers like Clarke (2002) see a similarity between the emotional involvement of CT believers and the emotions David Hume (1748/2008) has identified for the belief in miracles. Hume (1748/2008, p.84, emphasis in original) wrote that “[t]he passion of *surprize* and *wonder* [...] gives a sensible tendency towards the belief of those events.” The following fact might for some readers be able to stir such emotions: There was a TV series called *The Lone Gunmen* (Bowman, 2001, an X-Files spin-off) in the USA that had a conspiracy in the pilot episode’s main plot; a conspiracy by the government to fly a commercial aircraft into the World Trade Center in order to increase the sales of weapons made by the United States. The episode was aired six months before 9/11.

It is pleasurable (and yet, as in the example of *The Lone Gunmen*, sometimes a bit creepy) to detect hidden structures and meaning, connecting information, gaining insights and having *aha effects* (Muth & Carbon, 2013; Muth et al., 2015; Muth & Carbon, 2016). This is likely to contribute to the experience people are having when finding and elaborating conspiratorial explanations. But there seems to be a difference: The insights I might gain in uncovering a conspiracy might be rewarding, but they come at a price an artwork usually does not ask from us. Insights into a large-scale conspiracy potentially shatter our basic knowledge about society and our place in it.

### 5.1 Conspiracies: making it big

Conspiracy theories often affect society as a whole—they are *big*: for unnecessary vaccinations and a withheld cancer cure, *Big Pharma* is to blame; the erosion of privacy is a result of *Big Data*; the shallowness of media that makes us *amuse ourselves to death*, as Postman (1987) has feared years before the advent of commonly-accessible internet, is

driven by global media companies; and finally, *the* government is to blame for all the rest. In the worst case, these stakeholders are, in reality, a single group, the one percent of the one percent. As we have seen, we cannot refute such theories in principle, and Basham (2006) deems it not unlikely that at least one *malevolent global conspiracy* is going on. Given the technical means of our age, it probably is the first age where such a global network could work effectively without relying on cabalistic means of coordination.

Is it this hugeness that gives CTs their emotional-motivational spirit in our days? Mythologies once, comprising cosmogology and eschatology, had been *the* huge systemic narrations. In the Enûma Eliš, the gods fought Tiamat and were desperately looking for help; Marduk took up the quest, conquered and split Tiamat, and heaven and earth were created. Marduk became the mightiest god there ever was in the Sumerian pantheon (Kramer, 1981). Later, in Europe, it was Loki in Germanic myth and later on the devil in medieval Europe, who is a destroyer as well as a master-builder. In the final days, Loki will oppose the other gods; but Ragnarök is not the end, and a new world will follow (Simek, 2004, 2007). This eschatology is similar to the Christian revelation. The difference: The devil does have its share in bringing about the rapture, but gets vanquished; God does prevail here and can establish the new kingdom himself. So, common to these mythologies is a figure with features of a *trickster*, a force in the system bringing about division and radical change. The trickster is an *archetype* in the sense of Carl Gustav Jung (1986), that is, an intelligent and subversive character that is destined and self-empowered at the same time, that opposes the prevailing power and introduces chaos.

The argument here is not that a Jungian *collective unconscious* might exist; Bischof (1996), for instance, assumes these stories reflect an individual's ontogenesis. However, we might ascertain that stories that involve a "reframing of the imposing universal dimension, the imposing of a new universality" (Žižek, 2014, p.184) are as old as written history. As such, they appear successfully in popular culture. The teenager series *Buffy the Vampire Slayer* (Whedon, Greenwalt, Noxon, Kuzui, & Kuzui, 1997–2003), for instance, went beyond the usual coming-of-age story. Protagonist Buffy, an attractive teenage girl, was bound by fate to protect our world from demonic carnage. These dark powers often manifested in worldly leaders; for example, in the town's mayor. By accepting her destiny and by getting self-empowered, by hard training, by the help of her friends and by using her wits, Buffy is able to outsmart the demons and to save the day.

In literary fiction, the character *Harry Potter* from the novel series by Rowling (1997–2007) rises from an inconspicuous boy to the world's most powerful magician—by



accepting his fate, empowering himself, relying on his friends and using his wits. So in the end, he conquers the evil lord Voldemort who was plotting in secret against Harry Potter all along, and who had even killed Harry Potter's parents shortly after Harry's birth.

These are not pure tricksters in the Jungian sense. These popular characters are *heroes* as well as tricksters. Yet, their coming-of-age is a battle against secret plots, dark powers, and against ever-impending doom. They fight and often ridicule these powers, and by doing so they make visible the secret deeds of their enemies. Maybe these narratives are so powerful because they reflect our own coming-of-age, as Bischof (1996) suggests. In any case, they are extremely widespread and can therefore be considered well-known and cognitively accessible (at least in Western culture). Heroes and tricksters, sometimes unified in one person, opposing those in power, and an all-pervasive division (heaven and earth, good and evil) are integral part of such stories.

## 5.2 Waiting for the *Event*

Should Marduk, Loki and Lucifer as well as Buffy and Harry Potter concern us when considering the emotional-motivational impact of conspiracy theories in our days? The philosopher Slavoj Žižek, in his analysis of Western society today, reflects about the possibility of an *Event*, a complete shattering and re-arrangement of politics, religion and art:

In the last couple of years, we thus have dwelt in a continuous pre-evental situation in which an invisible barrier seems to prevent again and again the genesis of a proper Event, the rise of something New. One of the reasons for this invisible barrier is the latest ideological triumph of capitalism: each worker becomes his or her own capitalist, the 'entrepreneur-of-the-self' who decides how much to invest in his or her own future education, health and so on, paying for these investments by getting indebted. (Žižek, 2014, p.181)

When the change and *something New* should come about, it would be an *Event* changing the dimensions of judgement itself. It would also split the people: "In situations of deep crisis, an authentic division is urgently needed—a division between those who want to drag on within the old parameters and those of the necessary change." (Žižek, 2014, p.185)

We know from the myths and narrations we grew up with that such a rupture—or better, rapture—is in its beginning a story of power and conspiracy. But at some time,

a hero-trickster comes and stirs it all up. Loki, by mocking the gods, makes visible the power of those gods for the common people. A visible power, however, can be challenged and eventually conquered.

In a sense, Popper (1958/1980) would have been right to identify secularization as a reason for the growing prevalence of conspiracy theories: not necessarily because we attribute absolute power to the conspirators; but because we ourselves have taken the roles of Marduk, Loki and Lucifer, by identifying with Buffy and Harry. When people are longing for a thorough change in the system, the age-old stories still give a reasonable plan of action: spot the power; make visible the deeds and means of that power; challenge the power; divide people in preservers and changers; and hope for the Event that will change everything.

Getting control over threatening secret powers is a narrative embodied in probably the most well-known and influential theory of psychology: Freudian psychoanalysis. A therapy that, as noted by Melley (2000), bears a striking resemblance to common conspiratorial narratives: an individual, powerless and desperate, begins to look for hidden signs and meanings in dreams and childhood memories. The uncovered information makes visible the powers responsible for suffering: the *id* and the *super-ego* with their demands. Once dragged to light, the individual can begin to tame these hostile powers. The frame of reference changes completely (as it shifts from the unconscious to the conscious *I*) and a conscious, self-determinate life becomes possible.

### 5.3 Narration as a simulation of reality

But does narration work this way? It is one thing to identify recurring patterns in literature and television; and it seems likely that these narrations are an *expression* of some kind, a symbolic rendition of inner states. While that is interesting in its own right, it does not follow automatically that narrations also retro-act on people in the way just described.

Mar and Oatley (2008) argue that narrations are not only a model of the outside world. They also serve as a “simulation that allows us to know what another might be wanting, thinking, and feeling.” (p.175) With respect to McAdams (1993), this gain in knowledge would not be limited to other people, but would also help to understand oneself, although Mar and Oatley (2008) point out that life narratives are probably different from literary narratives.

Narrations for Mar and Oatley (2008) are abstractions of the social world disclosing the schemata of complex social processes, and at the same time “substantially less simple than other more explicitly didactic representations of social information that tend to be nonnarrative in structure.” (p.177) These stories can be regarded as simulations of reality and help us to understand the past, to predict the future, and to be prepared for difficult encounters. Even works from genres usually frowned upon, like thrillers and mystery novels, have their merits according to Mar and Oatley (2008): They might help to avoid deception in real life and lay bare the dangers of intra- and interpersonal conflict. This might even hold for the confrontation with propaganda, which “could prompt thoughts about how our own response would be quite different.” (p.186)

Reisenzein (2009) fully acknowledges the power of narrations to gain knowledge about ourselves and others. In contrast to computer simulations, however, he sees an important difference:

However, at least for the purpose of hypothesis testing, using existing literary works as simulation input may not be the best available option. From the perspective of simulation science, simulations are particularly informative if they are run repeatedly with varying parameters. This suggests that the simulation of a multiplicity of scenarios depicting different developments of the same basic predicament (a form of thought experimentation) will be more revealing than that of a single literary work describing only one possible course of events. (Reisenzein, 2009, p.36)

These arguments can help us to re-evaluate the findings by M. J. Wood et al. (2012). Participants were found to believe in different conspiracy theories at the same time (in one study regarding the death of Princess Diana, in another one the death of Osama bin Laden), even when the theories were mutually exclusive. The authors conclude that “conspiracism constitutes a monological belief system, drawing its coherence from central beliefs.” (p.6) However, we could think of the participants’ belief systems as instances of simulations in the sense of Reisenzein (2009), with varying parameters of input and outcome. This kind of conspiracy belief would not be a hackneyed and close-minded account of reality, but a rather sophisticated way to deal with the uncertainties and possibilities of a complex world.

## 5.4 The post-modern trap

Taking this view to extremes, reality itself is not defined by facts any more, “and the search for proof, indeed the objectivity of the facts does not put an end to this vertigo of information”, as Baudrillard (1994, p.16) writes; the countless models that can be generated for any fact precede the facts themselves. This so-called “logic of simulation” (p.16) negates any determined discursive position.

There is a caveat, however, when introducing the post-modern view by Baudrillard (1994) or Lyotard (2005) into the discourse on conspiracy theories. We can—and should—read these accounts as a diagnosis of a society where narratives become interchangeable. Of course, there is an aesthetic appeal to this idea. The movie *The Matrix* (Wachowski Brothers, 1999), for example, has become iconic as a new-millennium-motion-picture where reality and simulation, free will and determinism, and justice and injustice blend in and become exchangeable. The main plot can be considered a conspiracy on the largest possible scale: All of our reality is just a simulation in a computer system run by evil machines. *Neo*, the main character, is the saviour to end this greatest of all deceptions. In the first minutes of the motion picture, Neo is caught reading the book by Baudrillard (1994).

As researchers, we should not confuse this aesthetic game—and this diagnosis of society—with the academic perspective we take on the phenomenon. There are conspiracy theories that do not just speculate about the causes of Princess Diana’s fatal accident, but that postulate devilish Semitic/ Islamic/ African/ . . .deeds and thus might foster prejudice and hate. It is our task to treat such conspiracy theories as a phenomenon that is *not* interchangeable with any other simulation of reality. Not all narrations are equal; narrations that are a medium for prejudice are special. It is psychology’s task to tackle them.

## 5.5 Know thyself!

The thoughts on narration presented in this section are a speculative account; so they must not be treated as an explanation, but should be seen as a kind of heuristics. It might give us an idea why people, after the initial *suprize* and *wonder* sparked by a conspiracy theory, continue to *go down the rabbit hole*. Maybe spotting the enemy down there—down, like down in the unconscious—is just the first step. Yet, the promise is to

*The narrative power of conspiracy theories*

get in control again. We might learn what drives ourselves by learning what drives the enemy.

The next section describes a first empirical attempt to explore the relation between conspiracy theories and self-knowledge. The rationale will be to show that people will spontaneously construct conspiracy theories that are in accordance with their personal values, with these values endangered by an enemy that represents the opposite notion of those values.

## 6 Conference paper: Conspiracy belief and personal beliefs

If you know your enemies  
and know yourself, you  
will not be imperiled in  
a hundred battles.

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(Sun Tzu)

**O**UR personal values describe our goals in life: What do we want? What do we fear? Do we favour independence in our thoughts and actions, or do we prefer conformity and adhere to the rules of society?

Values not only describe our personal, trans-situational goals. They might also help us to describe societies as a whole. The Western ideal of an autonomous and self-reliant individual might, for example, be a stereotype frowned upon in Asian culture. The following section describes a first attempt to relate the psychological concept of values to an engagement in conspiracy theories.

**Motivation**<sup>7</sup> One of the most influential concepts of values in psychology was described by Shalom H. Schwartz, for example in Schwartz (2012). If the assumption should hold that conspiracy theories help us to recognize and express what is most important to us, then one's personal values should relate to the conspiracy theories he or she engages in.

The vantage point for our approach was an infamous building project in Germany: *Stuttgart 21*, the federal state government's plan in Stuttgart (Baden-Württemberg, Germany) to relocate the city's train station, that is: to build it from scratch, underground; in order to free up overground space for urban development.

As the projected building costs exploded and reached several billions, in 2010 people began to demonstrate, with over 100,000 people on the streets of Stuttgart (a chronology of the protests can be found at Südwestrundfunk, 2014). The demonstrations

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<sup>7</sup>Further details regarding theory, method and results can be found in the respective parts of the full manuscript, reproduced in Section A.4 exactly as it was submitted for and circulated at the conference on conspiracy theories in Miami, FL, 2015.

culminated in clashes between protesters and police, leaving some protesters severely wounded.

It is far from usual that a supposed waste of taxpayers' money is taken to the streets. And Stuttgart 21 was even more special: The protesters' education was above average with 40 percent holding a university degree, and the large majority strongly identified with democratic values (Bebnowski et al., 2010). Not only did these people decry the project cost; they insinuated the true intent behind Stuttgart 21 was to fill the bags of some top politicians and entrepreneurs, and the public was told lies. The main narration thus was: a conspiracy theory.

**Theory** We decided to base our study on the theory by Schwartz (2012). In its original form, it assumes ten basic values, that is, beliefs that refer to desirable goals and transcend specific situations. These values are: *universalism*, *benevolence*, *tradition*, *conformity*, *security*, *power*, *achievement*, *hedonism*, *stimulation* and *self-direction*. They can be imagined as a circumplex with mutually exclusive values at opposite ends of the circle (like, for example, achievement and universalism).

In later publications, Schwartz has extended the set to 19 values (Schwartz et al., 2012). For our approach, the earlier model was sufficient, as we only used the coarse circumplex model with four circle quarters: *openness to change* and *conservation* (opposed in the circumplex, i.e., mutually exclusive), and *self-enhancement* and *self-transcendence* (again, these two being opposed). Also, questionnaires with published German translations were available for the ten-value-model.

Under the assumption that narrations help us to recognize what is important to us, people should construct conspiracy theories that put their most important values at risk. Knowing the enemy helps to know oneself.

**Method** We fabricated a news story with mock printouts of internet news magazines that in Berlin a new program of study was to be established, a school called *future of humanity*. Stakeholders for this new course program were left-wing student groups (threatening self-enhancement by propagating communist ideas), McKinsey consulting (threatening self-transcendence by propagating egoism), "lesbian gay bisexual transgender"-groups (LGBT) threatening conservative values, and the archbishop of Berlin (threatening openness to change by propagating conservative values). According to the fabricated news stories, there was a breakdown in negotiations, but so far it was unclear why.

Using the paradigm of narrative construction, we had compiled cards with statements attributing the responsibility for the breakdown of negotiations to either one of these stakeholders, using again the tripartite categorization with official story, LiHoP and MiHoP. There were, for example, cards stating that LGBT groups were insisting on more gender-related studies for the school (LGBT–official), that accused McKinsey of secretly not supporting the process any more (McKinsey–LiHoP); and of the archbishop actively and secretly torpedoing the process (archbishop–MiHoP). In total, there were 48 cards.

The 35 students that participated in the study had to construct their *most plausible course of events why the negotiations had stalled*. They also filled out questionnaires related to Schwartz (2012): the *Short Schwartz’s Value Survey* (SSVS) by Lindeman and Verkasalo (2005) and the *Portrait Value Questionnaire* (PVQ) by Schmidt, Bamberg, Davidov, Herrmann, and Schwartz (2007); and the conspiracy scales by Brotherton et al. (2013), and by Bruder et al. (2013).

**Results** Using Kendall’s  $\tau_b$  (which does not require assumptions about the underlying distribution of values), we found significant correlations with the PVQ for the LGBT stakeholder group only.

- The higher the value for openness to change, the lower the conspiracy score regarding the LGBT community ( $\tau_b = -.289$ ,  $p = .029$ )
- The higher the value for conservatism, the higher the conspiracy score regarding the LGBT community ( $\tau_b = .317$ ,  $p = .016$ )
- The higher the value for self-transcendence, the lower the conspiracy score regarding the LGBT community ( $\tau_b = -.434$ ,  $p = .001$ )

To get a score for each person indicating how much conspiracy was assumed, we counted each official card that was selected with 0, each LiHoP item with 1 and each MiHoP item with 2. Participants scored a median value of 15.00 ( $SD = 10.32$ ), indicating that including LiHoP and MiHoP items in one’s story was common. There was no correlation with the conspiracy questionnaires.

**Discussion** Our results are compatible with the hypothesis that people spot an ‘enemy’ that endangers one’s most important values. Conservative people were prone to



assume an LGTB conspiracy. People open to change and self-transcendent people were significantly less inclined to blame the LGTB community.

However, for the other stakeholders, we did not find significant effects. It might be possible that ‘McKinsey’ and the ‘archbishop of Berlin’ were too far from the living reality of our Bavarian student sample. And ‘left-wing student groups’ are, in Bavaria, quite tame and not very present at the University of Bamberg.

Further studies would have to explore whether the hypothesis has to be refined; or if the stakeholder groups were not suitable. Stakeholders more relevant for the participants might give better insights.

**Critical appraisal** Being the first study—to our knowledge—to link the full spectrum of personal values and the content of conspiracy theories, our results were encouraging. Although only one of four stakeholder groups did relate significantly to the participants’ values, this relation was in accordance with our assumptions. Consequently, further studies with refined content might be promising.

It should be noted here that participants were in no need to construct any conspiracy at all. By using the official items only, a full and plausible account for the breakdown of negotiations would have been possible. This, again, supports our idea that thinking in conspiratorial narrations is the rule and not the exception. However, this does not explain the missing correlation with the two standard questionnaires on CTs. Further research might clarify whether these instruments are sensitive only to an established and elaborated conspiratorial mindset; while our method might be able to evoke conspiratorial thinking that is compatible with everyday reasoning.

The assumption that spotting the ‘enemy’ is a part of everyday reasoning might help to integrate results by other authors. For example, Lewandowsky, Gignac, and Oberauer (2013) found that conservatism and the belief in a benevolent free market strongly predicted the rejection of climate change, but there was no such effect for genetically modified foods. Oliver and Wood (2014) did not find a connection between CT belief and conservative beliefs. The belief that US president Barack Obama was not born in the United States (an opinion voiced by the so-called *Birthers*), however, was predominant among Republicans, that is, conservative people (Pasek, Stark, Krosnick, & Tompson, 2015).

It is plausible to assume that conservative people are opposed to scientists that propagate a reduction of traditional means of power generation and advocate *green*

technology. Genetically modified food, however, might help to strengthen domestic agricultural industry and would thus be consistent with conservative beliefs. Just recently, Nefes (2015) has found that American left- and right-wing adherents pick their conspiracies according to their worldview.

Yet, the research available so far points out a cultural gap between Anglo-American research and European approaches. The bipartite political system in the USA (and also in the UK) lends itself to a comparison of Republicans and Democrats. One just has to ask which of the two parties one would vote, with a third option being *no vote at all*—referring to the concept of partisanship, as used in Uscinski, Klofstad, and Atkinson (2016).

In Germany, for example, with five to six parties having realistic chances of being part of the next federal government<sup>8</sup>, in addition to non-voters, inferring participants' beliefs is more demanding.

As noted, the vast majority of participants did construct a conspiracy theory; already in Raab, Ortlieb, et al. (2013), this was the case. Do people construct conspiracy theories, no matter what, when given the chance? Or does it take some kind of trigger, to make people engage in conspiratorial thinking? In the next section, I will address this question.

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<sup>8</sup>According to voter research in May 2016, condensed for example at <http://www.wahlrecht.de/umfragen/>

## 7 Article: Conspiracy formation is in the detail

In my opinion the World Cup in Russia will be able to stabilize all the situation in this region of Europe that is suffering now.

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(Sepp Blatter in 2015,  
at that time Fifa president)

**M**EDIA CARRY MEANING AND COUNTERMEANING: Baudrillard (1994, p.84) reminds us here that there is no single—or simple—truth for important events. The analysis of US media by Herman and Chomsky (2002) proposes filter mechanisms in the flow of information from news source to a newspaper’s front page. Media company ownership, pressure by advertising companies, sources with a spin, and *flak*<sup>9</sup>.

The fifth filter identified by Herman and Chomsky (2002) is the *ideology of anti-communism*. Even half a century after Joseph McCarthy, “issues tend to be framed in terms of a dichotomized world of Communist and anti-Communist powers, with gains and losses allocated to contesting sides” (p.30). The supposed Bulgarian-KGB connection behind Mehmet Ali Ağca who shot Pope John Paul II in 1981 is at the heart of an extensive case study by Herman and Chomsky (2002). The KGB connection was favoured by US media in the years after the assassination attempt, and alternatives were not evaluated; that is, connections between Ağca and the Turkish fascist group *Grey Wolves* were not discussed publicly. Ganser (2005), too, points out the gap between evidence and news stories, even insinuating there might have been CIA support.

Why was Pope John Paul II shot? We will not find definitive answers here; yet, we can take the diagnosis by Herman and Chomsky (2002) that the media, and even reputable media, transport a meaning that is just one meaning—one simulation—of many possible ones. So we set out to explore the effect of slight differences in meaning in a journalistic text on the recipients.

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<sup>9</sup>Colloquial term for heavy criticism in the form of telephone calls, e-mails, letters, tweets, etc.; probably deriving from the German Flak, that is, **F**lug**a**bweh**r**kanone (anti-aircraft cannon)

**Motivation** Conspiracy theory research in most cases targets beliefs about important and well-known events (like 9/11, the death of Princess Diana, climate change, ...). Using these well-known events precludes research from analysing how a conspiracy belief begins to develop in the first place. An alternative might be to use fictional scenarios, employed for instance by Bost and Prunier (2013) and Raab et al. (2015). Yet, fictional settings might be perceived as artificial, not relevant, and thus run the danger of being processed differently (in cognitive and emotional terms) than *real* conspiracy theories.

We took the chance when an event suddenly hit the front pages in May 2015 that was unforeseen and bore the potential for a conspiracy theory of global dimensions: In May 2015, the USA indicted 16 Fifa officials for conspiracy and corruption. Soon there were speculations that these arrests were motivated by political motives; that the USA might try to impede the Fifa world cup 2018 in Russia. The investigations by Attorney General Loretta E. Lynch, then, would have been a proxy revenge scenario for the Crimean crisis.

We know from seminal studies like those by Loftus and Palmer (1974) that even very tiny bits of information—for instance, the verb indicating the cars' speed in a question about a car crash—might considerably influence what people remember and express. The research question in our approach: To determine whether hints at *causation* as well as *intention*—that is, aspects of agency—are necessary that people start to engage in conspiratorial thinking; with regard to an event they do not already hold a CT belief for.

We devised a study that was run in full just 48 hours after the US investigations became public. While many of our participants had heard of the investigations, the scenario was too fresh to have provoked conspiratorial thinking.

**Theory**<sup>10</sup> The attribution of agency might relate to conspiracy belief, as a conspiracy always is a deliberate plan by some agents. The data so far is inconclusive on the question whether CT believers are people who over-estimate the role of conscious agency and structure in the course of important events.

Dieguez, Wagner-Egger, and Gauvrit (2015) found no evidence that CT believers adhere to a “nothing happens by accident”-heuristics. They even found that CT belief was positively correlated with the attitude that bad events happen to people at random.

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<sup>10</sup>Further details regarding theory, method and results can be found in the respective parts of the full manuscript reproduced in Section A.5

In contrast, for Oliver and Wood (2014), a belief in strong and unseen forces was the best predictor for belief in CTs. A *hyperactive agency detection*, that is, the assumption of agency behind very small changes in the environment, was identified by van der Tempel and Alcock (2015) to correlate with conspiracy mentality. The idea of hyper-sensitive agency in connection with conspiracy theories was previously put forward by Franks et al. (2013). For Douglas, Sutton, Callan, Dawtry, and Harvey (2016), too, such agency detection (e.g., for inanimate objects) was positively associated with CT belief.

However, the correlations reported between conspiracy belief and hypersensitive agency detection are weak in general. A correlation of .26 is reported by van der Tempel and Alcock, 2015, for  $n=209$  undergraduates. Correlations of .17 and .22 respectively were reported in the studies by Douglas et al. (2016) ( $N=202$  and  $N=330$ , both via Amazon's *Mechanical Turk*).

So agency detection *might* be related to conspiracy belief. It is yet unclear, however, if this agency detection is a general trait by CT believers, or if it needs to be triggered by a special kind of information. Furthermore, it is unclear whether the attribution of agency grows parallel to the belief in a specific conspiracy theory (and thus is present when elaborated CT beliefs are involved), or if it is a feature already present when a conspiracy belief (for a given event) starts to form.

For our purpose, we used the *culpable control model* by Alicke (2000). It is rooted in the psychology of blame and differentiates aspects of processing evidence for harmful events. We also integrated the LiHoP-MiHoP-categorization by Ganser (2006). We arrived at two studies, one varying *causation* and one varying *intention* in the relationship of US investigations, the Fifa, and the world cup in Russia.

**Methods** Drawing from on-line newspaper reports on the Fifa investigations, we compiled a short, newspaper-style text reporting some facts:

Zurich/New York (dpa) - US Attorney General Loretta Lynch defended the investigations against world football federation FIFA, and the detention of seven FIFA officials in Zurich, at a press conference in New York. "This kind of corruption and the bribery in international soccer has been going on for two decades." US authorities are accusing the seven detained FIFA officials of corruption over a period of at least 24 years. "They corrupted the worldwide soccer business to enrich themselves." said Ms. Lynch. "They have done it again and again, year after year, tournament after tournament."

We devised a short questionnaire with socio-demographic questions on page one. Page two showed the newspaper text (that differed in its last sentences between groups and studies). On page three, participants were asked to answer twelve items on politics and soccer, with four explicitly referring to hidden and harmful intentions:

- The investigations are part of a global power game,
- The USA is trying to harm Russia with their investigations,
- The investigations becoming public right now is no coincidence,
- FIFA is just a pawn sacrifice in the USA's striving for global dominance.

On the last page, participants answered the GCB scale by Brotherton et al. (2013). The whole procedure took about ten minutes. All participants were naïve to the aims of the study, volunteered to participate and did not receive any compensation.

The Fifa investigations were revealed on Wednesday, March 27th 2015. We conducted our studies on Friday, 29th of May 2015, starting at 10:00 a.m. (CET) and finishing on the same day at 04:00 p.m. Participants were asked to participate in a study on the *perception of journalism regarding the Fifa revelations*.

IN STUDY 1 (CAUSATION) 102 students of the University of Bamberg were given the newspaper text on the US investigations and returned complete questionnaires. One half were randomly assigned to a group where the text was ending with the sentences: “There is the suspicion ‘that there have been irregularities in the allocations for the World Cups in 2018 (Russia) and 2022 (Qatar).’ This might lead to a reallocation of the upcoming World Cups. Due to the US investigations, the carrying out of the World Cup in Russia in three years is no longer certain.” (direct causation, that is, direct connection between investigation and the world cup)

The other half of participants received the same text, but ending with the sentences: “There is the suspicion that there have been irregularities in the allocations for the World Cups in 2018 (Russia) and 2022 (Qatar).’ This might lead to a reallocation of the upcoming World Cups. The investigations additionally led to political discussions beyond FIFA.” (indirect causation, that is, no direct connection between investigations and the world cup is made)

IN STUDY 2 (PURPOSE) 100 students of the University of Bamberg completed the questionnaires. One half received the text ending with: “The Russian president subsequently denounced the act as a plot against Russia to impede the Russian World Cup in three years: ‘The USA and the media try in an obvious campaign to harm Russia and to withdraw the World Cup’, said Vladimir Putin.” (purposeful intention; MiHoP, that is, the USA want to impede the world cup in Russia on purpose)

The other half received a text ending in: “There is the suspicion ‘that there have been irregularities in the allocations for the World Cups in 2018 (Russia) and 2022 (Qatar).’ This might lead to a reallocation of the upcoming World Cups. Some members of the Russian Duma now blame the USA that, due to their action, they approvingly accept the consequence of withdrawing the Russian World Cup in three years.” (non-purposeful intention; LiHoP, that is, the USA might have known that their actions might impede their world cup, but that was a side effect and not their intention in the first place)

**Results** We used the subscale *government malfeasance* from the GCB scale by Brotherton et al. (2013), as it relates to conspiracies wrought by the government, to assess the predisposition of a participant to engage in government-related conspiracy theories. The dependent variable was derived from the four items insinuating a US conspiracy.

IN STUDY 1 a simple slope analysis of our regression model showed that conspiratorial predispositions significantly and positively predicted conspiracy belief in the direct causation condition,  $\beta = .56$ ,  $SE = .13$ ,  $t(93) = 4.22$ ,  $p < .001$ , 95%  $CI_{\beta} = [.30, .82]$ , but not in the indirect causation condition,  $\beta = .15$ ,  $SE = .13$ ,  $t(93) = 1.11$ ,  $p = .268$ , 95%  $CI_{\beta} = [-.17, .41]$ .

IN STUDY 2 a simple slope analysis of our regression model showed that conspiratorial predispositions significantly and positively predicted conspiracy belief in the MiHoP condition,  $\beta = .52$ ,  $SE = .12$ ,  $t(96) = 4.22$ ,  $p < .001$ , 95%  $CI_{\beta} = [.27, .77]$ , but not in the LiHoP condition,  $\beta = .15$ ,  $SE = .16$ ,  $t(96) = .95$ ,  $p = .346$ , 95%  $CI_{\beta} = [-.17, .47]$ .

**Discussion** Study 1 revealed that people with a high conspiratorial predisposition begin to sense a conspiracy only when they are confronted with the implication of a direct causation. Study 2 supported this result: Only the notion of a purposeful (MiHoP) act

by the USA made people with high conspiratorial predispositions assume a conspiracy, whereas participants scoring low on the government malfeasance scale rejected the idea of a conspiracy even more. The LiHoP condition failed to provoke this effect.

These results indicate that the belief in a conspiracy theory does not come ‘out of nowhere’. It is not imposed on every new information a person receives. It rather takes specific facts and evidences—here, the notion of direct causal relation and/ or purposeful intention—that a person biased towards conspiratorial thinking will take this view. Interestingly, this seems to work both ways: People being sceptical of conspiracies will, confronted with such causal relations and purposeful intentions, begin to outright reject the idea of a conspiracy.

Our results support Dieguez et al. (2015), but are contrary to van der Tempel and Alcock (2015) as well as Douglas et al. (2016). A solution would be an interactionist view: People inclined to believe in CTs do not look for them behind every tree and under every stone. Yet, when the information available to these people gives rise to the suspicion that a purposeful bad intention has caused some bad effects, these people will be inclined to follow the conspiracy trail. In doing so, they will find additional information with evidence for causality and intent. It would be an interplay of disposition, information and situation.

**Critical appraisal** Our studies were the first to address conspiracy formation right when an important event begins to unfold. In hindsight, some aspects of our study might be improved. For instance, causality and purpose are—in reality and in our items—confounded to some extent. Although a manipulation check has assured that our assumed categories were perceived the way we designed them, a more careful wording might have made the distinction sharper.

There was a third study, too, which had to be dropped from analysis. There we had German protagonists commenting on the affair, and one fictitious quote in the text was by Lutz Bachmann, mastermind of the German anti-Muslim, anti-immigration grassroots movement PEGIDA (*Patriotische Europäer gegen die Islamisierung des Abendlandes*, that translates to *Patriotic Europeans opposing the Islamization of Occident*). His quote was nearly identical with the Putin quote in Study 2. However, from oral feedback we got from participants, many of them did not know Lutz Bachmann, and thus any results from this condition would have been vulnerable.

Uscinski et al. (2016) recently published a study where participants were asked about the media coverage in the lead up to the Congress election 2012 on *YouGov*.



503 participants responded to a question where a ‘media conspiracy’ was given as a possible cause for discussions about journalistic quality, and 512 to a question where the reason for quality problems was seen in ‘poor journalism’. Only those people who had the conspiracy cue *and* at the same time scored high in conspiratorial predisposition assumed that the media acted with a bias, so “the effects are highly dependent on an individual’s predispositions.” (Uscinski et al., 2016, p.12)

So our studies as well as the results by Uscinski et al. (2016) suggest that people do not constantly develop conspiracy theories. It is a combination of predisposition and cues in the information—namely, assumptions about causality and purpose—that make people engage in conspiratorial narrations.

While this can be considered one milestone in the understanding of the formation of conspiracy theories, there are further questions that need to be addressed for a full picture. For example, the properties of the supposed conspirators might make a difference (as the results presented in section 6 suggest). Uscinski et al. (2016) found that Republicans were most likely to assume a media conspiracy; probably because the enemy image of leftist media fits some stereotypes held by some Republicans. It would be interesting to explore whether it really is just some stereotype that is responsible here; or if a sophisticated system of beliefs and values is at the heart of such judgements.

Another very important point would be the *credibility of the source*. Uscinski et al. (2016) used anonymous allegations of conspiracy. In the studies presented here, we had used anonymous allegations, too, in Study 1; in Study 2, we referred to Vladimir Putin as a source. Credibility of the news medium and of the quoted source might make a difference. Which kind of difference, however, is not trivial. The *Protocols of the Elders of Zion*, in Germany published by Fritsch (1924), are supposed to have been found by “Russian police [...] in the year 1901 in the course of a house search in a Jewish domicile” (p.4). So people who wanted to believe these protocols to be genuine had to rely on an anonymous and shady source. It did not hinder (or maybe it did even foster) the rapid dissemination of this pamphlet.

In any case the procedure presented here should be refined and standardized. The goal would be a blueprint with generic scales and questions, and fields like:

Do you think that the actions by [insert conspirator here] will affect [insert victim here] and lead to [insert conspirator's goal here]?

*Article: Conspiracy formation*

Whenever a new scandal arises—in latest times, the *Volkswagen emissions scandal* and the *Panama Papers* come to mind—researchers could adopt the blueprint and investigate how conspiracy theories originate.

Fifa, Volkswagen, tax evasion: Obviously these topics are important to many people. They relate to leisure and recreation; to economy and personal experience; and to questions about politics and society. Conspiracy theories concern everyone. To make knowledge about CTs more widespread, a popular science book on conspiracy theories is currently work in progress. It will look at history, present scientific research, and illustrate the appeal as well as the danger of conspiratorial narrations. This book will be sketched in the following section.

## 8 A popular-science book on conspiracy theories

I think that the task  
of philosophy is not  
to provide answers, but  
to show how the way  
we perceive a problem  
can be itself part  
of a problem.

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(Slavoj Žižek 2011,  
Lecture 'Year of Distraction')

**I**N THE BEGINNING THERE WAS THE CONSPIRACY THEORY: This work-in-progress title for a popular-science book that is scheduled to be printed in 2017 acknowledges that conspiracy theories are as old as human history. Yet, in the book (to be issued by Springer Verlag; a small excerpt is reprinted here in section A.6) the historical perspective will be just the vantage point.

We know from Pagan (2005, 2012) and MacGregor (2013) that conspiracies, and consequently theories about conspiracies, have been a part of political and everyday life at least for the last 2000 years. Some authors (like deHaven-Smith and Witt, 2013) claim that a fear of conspiracy is deeply embedded in American culture because of the US's political history. Works like the books by Uscinski and Parent (2014) and Melley (2000) take a closer look at the phenomenon in the US.

But what does that mean for us? Maybe we are living in a *technopoly* world (Postman, 1993) and society is becoming a global village (McLuhan & Powers, 1989). Questions of agency, as addressed in this thesis, might become more important than ever. At the same time, conventional *grand narratives* like religion lose their explanatory power (Lyotard, 2005).

Conspiracy theories might help us to shape our *selves*, to identify important agents, and to find like-minded people. They can be part of a life-story in the sense of McAdams (1993). Thus, they might be a meta-narrative that creates meaning. Here, we will include reports like the book by Kay (2009) who delved into the conspiracist underground.

We will take this perspective in the book. Yet, this will be a cumbersome task: It is manifest—and has been addressed in this thesis, too—that conspiracy theories might

be dangerous, even deadly. Anti-Semitic theories are a huge problem (the *Protocols*, for example, have been around for over 100 years). Anti-Muslim theories are gaining momentum (and are even best-sellers, like Sarrazin, 2010). The media's reputation has suffered (seen with the infamous rallying cry *Lügenpresse* [liar press] by Pegida). We are, epistemically, on a *slippery slope* (Keeley, 2006).

One of our main objectives thus will be to present—understandable for the layman—the philosophical debate (for instance, from Coady, 2006b; Dentith, 2014; Clarke, 2002; Heins, 2007) and enrich it with own ideas, drawing for example on the works by Illies (2015) and Žižek (1991, 2014).

We will also introduce the reader to narrative psychology (Laszlo, 2008; Sommer, 2009; Zunshine, 2006), narratology (Koschorke, 2012), and theories related to the spreading of information, like the *meme* theory (Dawkins, 1989; Blackmore, 2005) and the science of rumours (DiFonzo, 2009; Gelfert, 2013).

Building upon this knowledge, we will develop a guideline how to deal with conspiracy theories. In doing so, we will show that epistemic problems with conspiracy theories do not justify rejection or acceptance *per se*. A CT recipient is rather asked:

- to explicate premises, that is, necessary and sufficient antecedents that would have to be true when the conspiracy theory was true; so the recipient has a broader basis for judgement
- to complement his epistemic judgements on the theory with ethical judgements; by asking: Who gets blamed? Who might be interested in blaming this group of people? What would be implications for society if the conspiracy theory was true? And what would be the implications for society be if the theory was false, but deliberately spread to foster distrust and hate?

We will conclude by showing that the *open society* proposed by Popper (1958/1980) is not only compatible with conspiracy theories; we will even argue that conspiracy theories help us in making power visible and help us in spotting dangers to a democracy (as voiced, for instance, by Moore, 2015). The best way to prevent a *Nineteen Eighty-Four* as well as a *Brave new world* scenario is to always imagine its possibility (a similar point was made by Horstmann, 2012, for apocalyptic scenarios).

This will only work, however, when people have the tools as well as the knowledge to really deal with conspiracy theories. It would, for instance, not be enough to simply reject the gross agitation in the *Protocols of the Elders of Zion*. They have been forged for a reason (although the reason itself we might not know for sure), and they are still

*A popular-science book on conspiracy theories*

spread from powers that follow an anti-Semitic agenda. To put it another way: There really is a hidden evildoing behind these protocols. To make visible these powers and to actively fight this conspiracy would be even better than just fighting the pamphlet this conspiracy uses.

To achieve a deep understanding of a phenomenon, it is desirable to understand its elements, the interactions between these different features, and the psychological function it implements. In other words: As soon as I would be able to *create* a phenomenon, I am likely to have grasped the essential constituents, and how they relate. The book will thus include a *construction kit*, a blueprint to generate a successful conspiracy theory. A preliminary version is sketched in the following section.

## 9 A preliminary *construction kit*

What I cannot create,  
I do not understand.

---

*(Richard Feynman)*

**T**HE famous quote “What I cannot create, I do not understand” was found on the blackboard of Richard Feynman at the time of his death. As soon as we know the elements of a phenomenon, and how they interact, we can try to *create* it. If we are successful, we are assured that we have gained a deep understanding of the phenomenon in question.

The theoretical and empirical accounts given in this thesis might be used to derive a—preliminary—*construction kit* for conspiracy theories. It will very likely not be complete, but it might very well be good enough to deepen our understanding. After all, when we know how to create something, we might get better in destroying it as well. Knowing the generic blueprint can guide us in the deconstruction of conspiracy theories, for example when confronted with anti-Semitic or anti-Muslim narrations. The following elements might be considered as important constituents and features of any CT:

1. There should be an *odd event*, as described in Raab, Ortlieb, et al. (2013): something that defies an easy explanation, something that is very complex—and that is, at the same time, relevant for the recipients.
2. With regard to this odd event, the conspiracy theory should provide a lot of information. Official statements and known facts should be mixed with information pointing at a cover-up of negligence, and also with information indicating malicious and deliberate actions by some powerful people. This mixture ensures that everyone can compile his or her most plausible narration, as shown in Raab, Ortlieb, et al. (2013); and it also ensures that the resulting narrations are shifted towards the conspiratorial spectrum, as shown in Raab, Auer, et al. (2013).
3. To foster the recipient’s story-building process, it is wise not only to include information regarding the odd event, but also information showing *evidence* for the conspiracy, hints that there is significant *non-transparency* at work, statements relating to *publicly available sources and opinions*, speculations about the *group of*

*conspirators*, and finally a pinch of *myth* to elevate the story to an above-everyday narrative level. (Raab, Ortlieb, et al., 2013)

4. The envisaged conspiracy theory has to relate to the recipient's personal values. It would allow him/ her to see his/ her values endangered by the conspiracy, and would empower him/ her to fight those evil forces. First evidence for this idea was given in Raab et al. (2015). The best way to ensure this is an odd event that is so complex and stratified that, in the sense of P.T. Barnum, *offers something for everybody*. A right-wing republican might interpret 9/11 as a cover-up by a weak and incompetent government. Left-wing liberals might assume, for the same event, that the government has at least welcomed the attack as false pretences to strengthen surveillance and to boost weapon sales. Anti-Semites will see the workings of Jewish capitalists at work. And so on.
5. To facilitate that people take the first step and embark on conspiratorial thinking, there should be an opportunity to present the odd event in combination with allegations that there might be *causality* and *purpose* behind, as shown in Gebauer et al. (2016).
6. And finally, there is a feature that more often than not follows from the complexity of the supposed conspiracy: There should be missing and contradicting information. This might encourage the potential CT believer to elaborate and extend the theory. This aspect has not been examined in this thesis, but might be an important avenue for future research. Koschorke (2016) speculates that inconsistencies and contradictions made a very important contribution to the success of *Mein Kampf* (Hitler, 1936). Especially intelligent and well-educated people would have felt the need to support the ideology by explaining inconsistencies and by contributing own ideas.

This construction kit recognizes the psychological qualities of conspiracy theories. It makes transparent *what* it takes; but also *why* people might benefit (in psychological terms) from conspiratorial theorizing. Understanding the functions of psychological processes goes beyond *describing* a phenomenon; it is an *explanation* and might guide us in *predictions* of human behaviour.

## 10 Conclusion

There is a crack,  
a crack in everything.  
That's how the light  
gets in.

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(Leonard Cohen, Anthem)

**C**ONSPIRACY theories are a *crack* in the system. That is, to speak with Leonard Cohen, how the light gets in. There are parallels between conspiratorial thinking and scientific reasoning: In both cases, we try to look *behind the things* and into them. Describing our reality is but the first step of academic progress. We try to understand the mechanisms at the heart of the phenomenon, that are only visible to skilled and systematic observation.

To look *into* the things, we can either break them (which is not the path of wisdom according to the sage Gandalf in Tolkien, 1954); or we can use cracks in the structure of reality to illuminate the inner workings of society; and of our own psyche.

### 10.1 Enlightenment by conspiracy theory

Conspiracy theories illuminate the fact that many people in our society are longing for a change; for an *Event* in the sense of Žižek (2014). Demands from the fringe of society, uttered by those marginalized by the system, in the narrative pattern of a conspiracy theory, would be *kynical* in the view of Blanusa (2011) and fulfil a positive function: “[D]eliberate restriction of freedoms and rights, usurpation of power and illegitimacy of its operation, manipulation, corruption, betrayal of trust, etc.” (p.104) are decried. An extreme form would be what Melley (2000) has called *agency panic*: The fear that our lives are completely controlled by external forces in modern society.

With the *Internet of Things* (IoT), where ordinary household devices like refrigerators, central heating control devices and electric toothbrushes collect data and send these data into the *Cloud*, our daily lives become penetrated by technology, not because there is any benefit; but simply because *technology can*. Such concerns were already raised and discussed by Postman (1993). This kind of all-encompassing surveillance is



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dangerous: “[W]hen privacy and the domestic sphere are dramatically eroded, and individual activity stands to be quite literally absorbed in to a larger power apparatus, society closes down and popular democracy ends.” (Tracy, 2015, p.24)

The *Center for Long-Term Cybersecurity* evaluates different scenarios for our digital future (Center for Long-Term Cybersecurity, 2016). The probably most threatening is the *Bubble 2.0* scenario where a chain-reaction of collapsing internet firms—previously over-rated at the stock markets—would create a new situation for cybercriminals: They might be able then to just buy huge datasets—for example, health-related data from a fitness start-up, or data related to sexual desires from a dating site—on the licit market from bankruptcy assets.

The fear of a live completely penetrated by technology is nothing we can dismiss lightly then. Huge and anonymous conglomerates—like *Alphabet*, the holding of which *Google* is just a part of—are extremely powerful *in fact*, not just in a paranoid mind. Also, democratic institutions are not the transparent entities they should be. The governmental bodies are becoming faceless, too, and according to Haase (2015) this is not happening by chance: Politicians conceal power and responsibility behind an ambiguous communication Haase (2015) has called *fogspeech*. Instead of a nameable agent, an all-encompassing *we* or an anonymous passive is communicated as decider.

The danger of a loss of agency is real. This would imply that conspiracy theories can be a means for people pushed to the edge of society to perceive self-efficacy again. By connecting to like-minded people who feel the same (and fear the same enemy), people might face better odds when fighting their marginalization. The metaphorical crack here is a sign of a society running the danger of losing its social cohesion. The conspiracy theory lets some light in, and it shines on the marginalized people as a light of hope. For society, it might be a wake-up light.

But it would be naïve nevertheless to consider CTs by people feeling marginalized a positive thing *per se*. Not only does it mean that there is a substantial number of people at the edge of society, which can hardly be called a good property of the general public. Also, the so-called anti-vaxxers, a phenomenon investigated by Jolley and Douglas (2014) as well as by Stojanov (2015), are an example that such accusations might backfire on society.

Anti-vaxxers (which need not even be marginalized in the usual sense; well-paid academics can be anti-vaxxers, too) assume that *Big Pharma* exaggerates the benefits and downplays the risks of vaccinations. These parents opposing vaccination claim, for example, that flu shots cause autism. The recurrence of potentially deadly diseases

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in Western countries would be the outcome if this movement should gain enough momentum. It is a sign of *kynical* thinking gone wrong: It targets big and anonymous organizations and endangers the life of ordinary people. This kind of light is bound to fool us, like a will-o'-the-wisp.

Another crack that lets in some light that shines upon society and the people living in it is something Blanusa (2011) has diagnosed as *conspiracy-theory panic* and *cynical thinking*. CTs perpetuated by a political system are a means of homogenizing society. The *Other* is blamed to create unity. In totalitarian systems, those conspiracy theories also 'explain' why the totalitarian state is not the paradise promised.

The *Protocols of the Elders of Zion* are paradigmatic here. They have been used for anti-Semitic propaganda at the beginning of the 20th century. They have been used as a means of agitation in the 'Third Reich'. And even today, the text is used to convey hate. The diagnosis by Blanusa (2011) fits perfectly here: From the perspective of the ideology, the *Protocols* might have explained the shortcomings of the 'Reich' by blaming the Jews. In an even more perfidious move, the mechanisms of totalitarian Germany—control of economy, education, law and the press—were insinuated to be Zionist plans. The *Other* is scapegoat and smokescreen at the same time. The light coming through this crack is a warning light.

These considerations regard society and groups. On an individual level, the crack exposed by a conspiracy theory is like a window to the soul of the believer. His or her hopes, fears and personal values might manifest in the theory proposed. The conspiratorial narration might help a person to find his or her place in the world and to focus on important values. For a psychologist, this raises the opportunity to relate to this person and to explore his or her subjective theories on important matters.

A conspiracy theory fosters knowledge here in areas where it is usually dark. Our own personal values, for example, are not readily accessible to us. We have to recognize and understand our thoughts and actions to recognize ourselves. Shed some light on those aspects of our own psyche: A conspiracy theory can do that; a rather comforting light.

## 10.2 And the message is ..?

When McLuhan (1964/2002) asserted that *the medium is the message*, he meant that each new medium (be it, to name but a few, spoken word, written word, print, electric

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light, the telephone, or weapons) is an extension of man. The extension brings about personal and social consequences that are specific to the *medium*, and not the content, and “the ‘message’ of any technology is the change of scale or pace or pattern that it introduces in human affairs.” (p.8)

Following this definition, a conspiracy theory is a medium. It is a bridge between sender and receiver, it makes visible powers in society that are usually hidden, it identifies malicious agents, and it reveals agendas otherwise unknown. Conspiracy theories do change the scale and pattern of human affairs. For that, it does not even matter how valid a given theory is. The message is: *The truth is out there* (a claim appearing in most opening sequences of the *X-Files* by Carter et al., 1993–2002, 2016). The truth will, however, not be a pleasant one, and it has to be acquired by hard and sometimes dirty epistemic work. The proper response, then, to the message would be: *I want to believe!* (an exclamation written on a poster in the office of Fox Mulder, a main protagonist in the *X-Files*; he is the never-satisfied seeker for hidden information). However, do not believe what you are told: Believe what you have found out yourself!

Completely independent from its content, any CT begs for a change in scale and pattern of human affairs. The scale gets wider (when the enemies are powerful), and it should be extended to include previously un-seen realms of reality (where the conspirators operate). The pattern also is substantially altered: general distrust is amplified, but bonds to like-minded are strengthened.

The results presented in this thesis might help us to better assess the cracks in societal and personal narrations. CTs are a message in themselves. To better understand the message, we should not stop to invent and refine methods to explore those theories. We have to better understand the dangers of conspiracy theories; and at the same time we have to acknowledge the positive sides of CTs, too. Yet, the message—the conspiracy theory—is not created and sent at every opportunity; it takes an interaction of recipient, information and event. As soon as we understand that the message *I believe that [enter conspiracy here]* can tell us much about the sender of that message, psychology will help us to connect disciplines like philosophy, communication sciences, politics, sociology, and narratology.

It is unlikely that conspiracy theories will lose significance in the years to come. The topic is here to stay, and psychology has to assume responsibility and engage in research, together with other disciplines. At times, we might feel like Sisyphus, when confronted with all those theories floating around in books, web logs, and internet message boards; but we must imagine us to be happy doing this work. Maybe Horstmann (2012) is right in assuming that narrations of impending danger help us to make a

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stand against that imagined peril. Then there would be one thing that would be even more distressing than a society with many conspiracy theories around: A society where its members have given up conspiratorial thinking at all. Either *Brave new world* or *Nineteen eighty-four* would have become reality, then.

## References

- Abalakina-Paap, M., Stephan, W., Craig, T., & Gregory, W. (1999). Beliefs in conspiracies. *Political Psychology, 20*(3), 637–647. doi:10.1111/0162-895x.00160
- Alicke, M. D. (2000). Culpable control and the psychology of blame. *Psychological Bulletin, 126*(4), 556–574. doi:10.1037/0033-2909.126.4.556
- Barkun, M. (2003). *A culture of conspiracy. Apocalyptic visions in contemporary America*. Berkeley: University of California Press.
- Bartoschek, S. (2015). *Bekanntheit von und Zustimmung zu Verschwörungstheorien – eine empirische Grundlagenarbeit*. Hannover: JMB Verlag.
- Basham, L. (2006). Malevolent global conspiracy. In D. Coady (Ed.), *Conspiracy theories. The philosophical debate*. (pp. 93–106). Aldershot: Ashgate.
- Baudrillard, J. (1994). *Simulacra and simulation*. Ohio: The University of Michigan Press.
- Bebnowski, D., Hermann, C., Heyne, L., Hoeft, C., Kopp, J., & Rugenstein, J. (2010). Neue Dimensionen des Protests? Ergebnisse einer explorativen Studie zu den Protesten gegen Stuttgart 21. [New dimensions of protest? Results from an explorative study regarding the Stuttgart 21 protests.] Retrieved from <http://www.demokratie-goettingen.de/content/uploads/2010/11/Neue-Dimensionen-des-Protests.pdf>
- Benz, W. (Ed.). (2009). *Handbuch des Antisemitismus 02. Personen*. Berlin: Gruyter, de Saur.
- Billig, M. (1987). Anti-Semitic themes and the British far left: some social-psychological observations on indirect aspects of the conspiracy tradition. In C. F. Graumann & S. Moscovici (Eds.), *Changing conceptions of conspiracy* (pp. 115–136). New York: Springer.
- Bischof, N. (1996). *Das Kraftfeld der Mythen*. München: Piper.
- Blackmore, S. (2005). *Die Macht der Meme oder die Evolution von Kultur und Geist*. München: Spektrum-akademischer Vlg.
- Blanusa, N. (2011). Depathologized conspiracy theories and cynical reason: discursive positions and phantasmatic structures. *Croatian Political Science Review, 48*(1), 94–107. doi:10.5860/choice.49-1352

## References

- Bost, P. R. & Prunier, S. G. (2013). Rationality in conspiracy beliefs: the role of perceived motive. *Psychological Reports, 113*(1), 118–128. Psychol. Rep. doi:10.2466/17.04.PR0.113x17z0
- Bowman, R. (Director), & Millennium Canadian Productions Ltd., Ten Thirteen Productions, & 20th Century Fox Television. (Producer). (2001). *The Lone Gunmen: pilot episode*. 20th Century Fox Television.
- Brotherton, R. & French, C. C. (2014). Belief in conspiracy theories and susceptibility to the conjunction fallacy. *Applied Cognitive Psychology, 28*(2), 238–248. doi:10.1002/acp.2995
- Brotherton, R., French, C. C., & Pickering, A. D. (2013). Measuring belief in conspiracy theories: the generic conspiracist beliefs scale (GCB). *Frontiers in Psychology, 4*. doi:10.3389/fpsyg.2013.00279
- Brown, S. R. (1996). Q methodology and qualitative research. *Qualitative health research, 6*(4), 561–567.
- Bruder, M., Haffke, P., Neave, N., Nouripanah, N., & Imhoff, R. (2013). Measuring individual differences in generic beliefs in conspiracy theories across cultures: the conspiracy mentality questionnaire (CMQ). *Frontiers in Psychology, 4*. doi:10.3389/fpsyg.2013.00225
- Carbon, C. C. & Leder, H. (2005). The repeated evaluation technique (RET). a method to capture dynamic effects of innovativeness and attractiveness. *Applied Cognitive Psychology, 19*(5), 587–601. doi:10.1002/acp.1098
- Carter, C., Goodwin, R. W., Gordon, H., Spotnitz, F., Gilligan, V., Shiban, J., . . . Greenwalt, D. (Producer). (1993–2002, 2016). *The X-Files*. 20th Century Fox Television.
- CBS News. (1993). CBS News/New York Times State of the Union Poll, January 1992. ICPSR - Interuniversity Consortium for Political and Social Research. doi:10.3886/ICPSR06072.v2
- Cybersecurity future 2020. (2016, April 27). Retrieved from [https://cltc.berkeley.edu/files/2016/04/cltcReport\\_04-27-04a\\_pages.pdf](https://cltc.berkeley.edu/files/2016/04/cltcReport_04-27-04a_pages.pdf)
- Clarke, S. (2002). Conspiracy theories and conspiracy theorizing. *Philosophy of the Social Sciences, 32*(2), 131–150. doi:10.1177/004931032002001
- Coady, D. (2006a). Conspiracy theories and official stories. In D. Coady (Ed.), *Conspiracy theories. The philosophical debate*. (pp. 115–128). Aldershot: Ashgate.

## References

- Coady, D. (Ed.). (2006b). *Conspiracy theories: the philosophical debate*. Aldershot, Hants, England, Burlington, VT: Ashgate.
- Commons and Lords Hansard. (2003, January 15). Engagements in the House of Commons debate. Retrieved from <http://hansard.millbanksystems.com/commons/2003/jan/15/engagements>
- Dawkins, R. (1989). *The Selfish Gene*. Oxford: Oxford University Press.
- Deacon, L. (2015, July 20). Cameron crackdown on ‘anti-British’ Muslims. *The Times Online*. Retrieved from <http://www.thetimes.co.uk/tto/news/politics/article4502986.ece>
- deHaven-Smith, L. & Witt, M. T. (2013). Conspiracy theory reconsidered: responding to mass suspicions of political criminality in high office. *Administration Society*, 45(3), 267–295. doi:10.1177/0095399712459727
- Dentith, M. R. X. (2014). *The philosophy of conspiracy theories*. Houndmills: Palgrave Macmillan.
- Dieguez, S., Wagner-Egger, P., & Gauvrit, N. (2015). Nothing happens by accident, or does it? a low prior for randomness does not explain belief in conspiracy theories. *Psychological Science*, 26(11), 1762–1770. doi:10.1177/0956797615598740
- DiFonzo, N. (2009). *The Watercooler Effect: an indispensable guide to understanding and harnessing the power of rumors*. New York: Avery Pub Group.
- Douglas, K. M. & Sutton, R. M. (2008). The hidden impact of conspiracy theories: perceived and actual influence of theories surrounding the death of Princess Diana. *Journal of Social Psychology*, 148(2), 210–221. J. Soc. Psychol. doi:10.3200/socp.148.2.210-222
- Douglas, K. M. & Sutton, R. M. (2015). Climate change: why the conspiracy theories are dangerous. *Bulletin of the Atomic Scientists*, 71(2), 98–106. doi:10.1177/0096340215571908
- Douglas, K. M., Sutton, R. M., Callan, M. J., Dawtry, R. J., & Harvey, A. J. (2016). Someone is pulling the strings: hypersensitive agency detection and belief in conspiracy theories. *Thinking & Reasoning*, 22(1), 57–77. doi:10.1080/13546783.2015.1051586
- Doyle, C. (2015, July 30). National security letters in foreign intelligence investigations: legal background. Retrieved from <http://www.fas.org/sgp/crs/intel/RL33320.pdf>

## References

- Elliston, J. (2002). *Psywar on Cuba: declassified history of U.S. anti-Castro propaganda*. New York: Ocean Press.
- Faiola, A. (2011, July 20). Cameron defends himself to British Parliament over ties to phone-hacking scandal. *The Washington Post Online*. Retrieved from [https://www.washingtonpost.com/world/europe/cameron-addresses-parliament-on-phone-hacking/0000/06/01/gIQAPwtTPI\\_story.html](https://www.washingtonpost.com/world/europe/cameron-addresses-parliament-on-phone-hacking/0000/06/01/gIQAPwtTPI_story.html)
- Feinberg, M. & Willer, R. (2011). Apocalypse soon? Dire messages reduce belief in global warming by contradicting just—world beliefs. *Psychological Science*, *22*(1), 34–38. Psychol. Sci. doi:10.1177/0956797610391911
- Franks, B., Bangerter, A., & Bauer, M. (2013). Conspiracy theories as quasi-religious mentality: an integrated account from cognitive science, social representations theory and frame theory. *Frontiers in Psychology*, *4*. doi:10.3389/fpsyg.2013.00424
- Fritsch, T. (Ed.). (1924). *Die zionistischen Protokolle. Das Programm der internationalen Geheimregierung*. Leipzig: Hammer-Verlag.
- Furnham, A. (2013). Commercial conspiracy theories. *Frontiers in Psychology*, *4*. doi:10.3389/fpsyg.2013.00379
- Ganser, D. (2005). *Nato's secret armies: Operation Gladio and terrorism in Western Europe; contemporary security studies*. London: Routledge.
- Ganser, D. (2006). The 'Strategy of Tension' in the Cold War period. In D. R. Griffin & P. D. Scott (Eds.), *9/11 and American Empire, Volume 1: intellectuals speak out* (pp. 79–100). Northampton, MA: Interlink Pub Group Inc.
- Gebauer, F., Raab, M. H., & Carbon, C. C. (2016). Conspiracy formation is in the detail: on the interaction of conspiratorial predispositions and semantical cues. *Manuscript under revision*.
- Gelfert, A. (2013). Rumor, gossip and conspiracy theories. Pathologies of testimony and the principle of publicity. In G. Dalziel (Ed.), *Rumor and communication in Asia in the Internet Age (media, culture and social change in Asia series)* (pp. 20–45). London: Routledge.
- Goertzel, T. (1994). Belief in conspiracy theories. *Political Psychology*, *15*(4), 731–742. doi:10.2307/3791630
- Griffin, D. R. & Scott, P. D. (Eds.). (2006). *9/11 and American Empire, Volume 1: intellectuals speak out*. Northampton, MA: Interlink Pub Group Inc.



## References

- Grimes, D. R. (2016). On the viability of conspirational beliefs. *PLoS ONE*, 11(1). doi:10.1371/journal.pone.0147905
- Groh, D. (1987). The temptation of conspiracy theory, or: why do bad things happen to good people? Part i: preliminary draft of a theory of conspiracy theories. In C. F. Graumann & S. Moscovici (Eds.), *Changing conceptions of conspiracy* (pp. 1–14). New York: Springer.
- Grzesiak-Feldman, M. & Irzycka, M. (2009). Right-wing authoritarianism and conspiracy thinking in a Polish sample. *Psychological reports*, 105(2), 389–393. doi:10.2466/PRO.105.2.389-393
- Haase, M. (2015). ‘Nebelsprech’ – Sprechen in der parlamentarischen Demokratie [“fogspeech” – speaking in the parliamentary democracy]. *Linguistik Online*. doi:10.13092/1o.73.2194
- Hagemeister, M. (2001). Der Mythos der ‘Protokolle der Weisen von Zion’. In U. Caumanns & M. Niendorf (Eds.), *Verschwörungstheorien: Anthropologische Konstanten – historische Varianten* (pp. 89–102). Deutsches Historisches Institut Warszawa: Einzelveröffentlichungen des Deutschen Historischen Instituts Warschau. Osnabrück: Fibre.
- Heins, V. (2007, November). Critical theory and the traps of conspiracy thinking. *Philosophy & Social Criticism*, 33(7), 787–801. doi:10.1177/0191453707081675
- Herman, E. S. & Chomsky, N. (2002). *Manufacturing consent. The political economy of the mass media*. New York: Pantheon Books.
- Hitler, A. (1936). *Mein Kampf*. München: Zentralverlag der N.S.D.A.P. Eher Nachf.
- Hofstadter, R. (1964). The paranoid style in American politics. *Harper’s Magazine*, 1(11), 77–86. doi:10.2307/40200358
- Horstmann, U. (2012). *Abschreckungskunst*. Paderborn: Fink Wilhelm GmbH + Co.KG.
- Hume, D. (1748/2008). *An enquiry concerning human understanding*. Oxford: Oxford University Press.
- Huxley, A. (1932/2005). *Brave new world and brave new world revisited*. New York: Perennial.
- Illies, C. (2015). *Philosophische Anthropologie im biologischen Zeitalter*. Frankfurt am Main: Suhrkamp Verlag GmbH.

## References

- Jolley, D. (2013). Are conspiracy theories just harmless fun? *Psychologist*, *26*(1), 60–62. doi:10.1136/emj.20.6.538
- Jolley, D. & Douglas, K. M. (2014). The effects of anti-vaccine conspiracy theories on vaccination intentions. *PLoS ONE*, *9*(2). doi:10.1371/journal.pone.0089177
- Jung, C. G. (1986). *Four archetypes: mother, rebirth, spirit, trickster*. London: Routledge.
- Kay, J. (2009). *Among the truth. A journey through America's growing conspiracist underground*. New York: Harper Collins.
- Keeley, B. L. (2006). Of conspiracy theories. In D. Coady (Ed.), *Conspiracy theories. The philosophical debate*. (pp. 45–60). Aldershot: Ashgate.
- Kelley-Romano, S. (2008, April). Trust no one: the conspiracy genre on American television. *Southern Communication Journal*, *73*(2), 105–121. doi:10.1080/10417940802009509
- Kissel, R. (2015, June 16). 'Game of Thrones' finale sets ratings record. *Variety Online*. Retrieved from <http://variety.com/2015/tv/news/game-of-thrones-finale-ratings-jon-snow-cersei-1201519719/>
- Knight, P. (2000). *Conspiracy culture. From the Kennedy assassination to The X-Files*. London: Routledge.
- Koschorke, A. (2012). *Wahrheit und Erfindung*. Frankfurt am Main: Fischer, S.
- Koschorke, A. (2016). *Adolf Hitlers 'Mein Kampf'*. Berlin: Matthes & Seitz Verlag.
- Kramer, S. N. (1981). *History begins at Sumer. Thirty-nine firsts in recorded history*. Philadelphia: Pennsylvania Press.
- Laszlo, J. (2008). *The science of stories: an introduction to narrative psychology*. London: Routledge.
- Lewandowsky, S., Gignac, G. E., & Oberauer, K. (2013). The role of conspiracist ideation and worldviews in predicting rejection of science. *PLoS ONE*, *8*(10), e75637. doi:10.1371/journal.pone.0075637
- Lewandowsky, S., Oberauer, K., & Gignac, G. E. (2013). Nasa faked the moon landing—therefore, (climate) science is a hoax: an anatomy of the motivated rejection of science. *Psychological Science*, *24*(5), 622–633. Psychol. Sci. doi:10.1177/0956797612457686

## References

- Lindeman, M. & Verkasalo, M. (2005). Measuring values with the Short Schwartz's Value Survey. *Journal of Personality Assessment*, 85(2), 170–178. doi:10.1207/s15327752jpa8502\_09
- Loftus, E. F. & Palmer, J. C. (1974). Reconstruction of automobile destruction: an example of the interaction between language and memory. *Journal of Verbal Learning and Verbal Behavior*, 13(5), 585–589. doi:10.1016/S0022-5371(74)80011-3
- Lyotard, J.-F. (2005). *Das postmoderne Wissen. Ein Bericht* (P. Engelmann, Ed.). Wien: Edition Passagen.
- MacAskill, E. (2013, June 9). Edward Snowden, NSA files source: 'if they want to get you, in time they will'. *The Guardian*. doi:10.1787/888932606587
- MacGregor, N. (2013). *Shakespeares ruhelose Welt*. München: Beck C. H.
- Mar, R. A. & Oatley, K. (2008). The function of fiction is the abstraction and simulation of social experience. *Perspectives on Psychological Science*, 3(3), 173–192. doi:10.1111/j.1745-6924.2008.00073.x
- McAdams, D. P. (1993). *The stories we live by. Personal myths and the making of the self*. New York: Guilford Press.
- McHoskey, J. W. (1995). Case closed—on the John F. Kennedy assassination—biased assimilation of evidence and attitude polarization. *Basic and Applied Social Psychology*, 17(3), 395–409. Basic Appl Soc. Psychol. doi:10.1207/s15324834basp1703\_7
- McLuhan, M. (1964/2002). *Understanding media. The extensions of man*. London: Routledge Classics.
- McLuhan, M. & Powers, B. R. (1989). *The global village. Transformations in world life and media in the 21st Century*. New York: Oxford University Press.
- Melley, T. (2000). *Empire of conspiracy. The culture of paranoia in postwar America*. Ithaca: Cornell Univ Press.
- Moore, A. (2015, March). *Useful idiots: on the democratic virtues of conspiracy theories*. Paper presented at the Conference on Conspiracy Theories, Miami, FL.
- Muth, C. & Carbon, C. C. (2013). The aesthetic aha: on the pleasure of having insights into gestalt. *Acta Psychologica*, 144(1), 25–30. doi:10.1016/j.actpsy.2013.05.001
- Muth, C. & Carbon, C. C. (2016). SeIns: semantic instability in art. *Art & Perception*, 4(1-2), 145–184. doi:10.1163/22134913-00002049

## References

- Muth, C., Raab, M. H., & Carbon, C. C. (2015). The stream of experience when watching artistic movies. dynamic aesthetic effects revealed by the continuous evaluation procedure (CEP). *Frontiers in Psychology, 6*(365). doi:10.3389/fpsyg.2015.00365
- Nefes, T. S. (2015). Scrutinizing impacts of conspiracy theories on readers' political views: a rational choice perspective on anti-semitic rhetoric in Turkey. *The British journal of sociology, 66*(3), 557–575. doi:10.1111/1468-4446.12137
- Oliver, J. E. & Wood, T. J. (2014). Conspiracy theories and the paranoid style(s) of mass opinion. *American Journal of Political Science, 58*(4), 952–966. doi:10.1111/ajps.12084
- Orwell, G. (1949/1989). *Nineteen eighty-four*. London: Penguin Books Ltd (UK).
- Pagan, V. E. (2005). *Conspiracy narratives in Roman history*. Austin: Univ of Texas Pr.
- Pagan, V. E. (2012). *Conspiracy theory in Latin literature*. Austin: University of Texas Press.
- Pasek, J., Stark, T. H., Krosnick, J. A., & Tompson, T. (2015). What motivates a conspiracy theory? birther beliefs, partisanship, liberal-conservative ideology and anti-black attitudes. *Electoral Studies, 40*, 482–489. doi:10.1016/j.electstud.2014.09.009
- Pigden, C. (2006a). Complots of mischief. In D. Coady (Ed.), *Conspiracy theories. The philosophical debate*. (pp. 139–166). Aldershot: Ashgate.
- Pigden, C. (2006b). Popper revisited, or what is wrong with conspiracy theories? In D. Coady (Ed.), *Conspiracy theories. The philosophical debate*. (pp. 17–44). Aldershot: Ashgate.
- Pleasance, C. (2014, May 10). Revealed: the real history behind Game of Thrones' fantastical characters (and it's surprisingly like the Wars of the Roses). *The Daily Mail Online*. Retrieved from <http://www.dailymail.co.uk/news/article-2625187/Revealed-The-REAL-history-Game-Thrones-fantastical-characters-surprisingly-like-Wars-Roses.html>
- Popper, K. R. (1958/1980). *Die offene Gesellschaft und ihre Feinde II Falsche Propheten. Hegel, Marx und die Folgen [Open society and its enemies, volume 2: The high tide of prophecy: Hegel, Marx, and the aftermath]*. München: Francke Verlag.
- Popper, K. R. (1976). *Conjectures and refutations. The growth of scientific knowledge*. London: Routledge and Keegan Paul.

## References

- Postman, N. (1987). *Amusing ourselves to death*. London: Methuen Publishing Ltd.
- Postman, N. (1993). *Technopoly*. New York: Random House USA Inc.
- Raab, M. H., Auer, N., Ortlieb, S. A., & Carbon, C. C. (2013). The Sarrazin effect: the presence of absurd statements in conspiracy theories makes canonical information less plausible. *Frontiers in Psychology, 4*. doi:10.3389/fpsyg.2013.00453
- Raab, M. H., Kammerl, B., & Carbon, C. C. (2015, March). *Conspiracy belief and personal beliefs—exploring the linkage between a person's value system and the tendency for conspiracy beliefs*. Paper presented at the Conference on Conspiracy Theories, Miami, FL.
- Raab, M. H., Muth, C., & Carbon, C. C. (2013). M<sup>5</sup>oX: Methoden zur multidimensionalen und dynamischen Erfassung des Nutzererlebens. In S. Boll-Westermann, S. Maaß, & R. Malaka (Eds.), *Workshopband Mensch & Computer 2013* (pp. 155–164). München: Oldenburg Verlag. doi:10.1524/9783486781236.155
- Raab, M. H., Ortlieb, S., Auer, N., Guthmann, K., & Carbon, C. C. (2013). Thirty shades of truth: conspiracy theories as stories of individuation, not of pathological delusion. *Frontiers in Psychology, 4*. doi:10.3389/fpsyg.2013.00406
- Reddit transparency report, 2014. (2015, January 29). Retrieved from <https://www.reddit.com/wiki/transparency/2014>
- Reddit, Inc. Transparency Report, 2015. (2016). Retrieved from <https://www.reddit.com/wiki/transparency/2015>
- Reisenzein, R. (2009). On literary works as simulations that run on minds. *Emotion Review, 1*(1), 35–36. doi:10.1177/1754073908097183
- Rowling, J. K. (1997–2007). *Harry Potter and ... (vol. 1–7)*. London: Bloomsbury.
- Sarrazin, T. (2010). *Deutschland schafft sich ab*. München: DVA Dt.Verlags-Anstalt.
- Schmidt, P., Bamberg, S., Davidov, E., Herrmann, J., & Schwartz, S. H. (2007). Die Messung von Werten mit dem Portraits Value Questionnaire' [Measuring values with the Portraits Value Questionnaire]. *Zeitschrift für Sozialpsychologie, 38*(4), 261–275. doi:10.1024/0044-3514.38.4.261
- Schwartz, S. H. (2012). An overview of the Schwartz theory of basic values. *Online Readings in Psychology and Culture, 2*(1). doi:10.9707/2307-0919.1116

## References

- Schwartz, S. H., Cieciuch, J., Vecchione, M., Davidov, E., Fischer, R., Beierlein, C., ... Konty, M. (2012). Refining the theory of basic individual values. *Journal of Personality and Social Psychology*, *103*(4), 663–688. doi:10.1037/a0029393
- Simek, R. (2004). *Götter und Kulte der Germanen*. München: Beck C. H.
- Simek, R. (2007). *Die Edda*. München: Beck C. H.
- Smith, C. (2016, February 19). By the numbers: 60+ amazing reddit statistics. Retrieved from <http://expandedramblings.com/index.php/reddit-stats/>
- Sommer, R. (2009). Kollektiverzählungen. Definition, Fallbeispiele und Erklärungsansätze. In C. Klein & M. Martinez (Eds.), *Wirklichkeitserzählungen. Felder, Formen und Funktionen nicht-literarischen Erzählens* (pp. 229–244). Stuttgart: Metzler.
- Soyer, F. (2014). The anti-Semitic conspiracy theory in sixteenth-century Spain and Portugal and the origins of the Carta de los Judíos de Constantinopla: new evidence. *Sefarad*, *74*(2), 369–388. doi:10.3989/sefarad.014.010
- Stojanov, A. (2015). Reducing conspiracy theory beliefs. *Psihologija*, *48*(3), 251–266. doi:10.2298/psi1503251s
- Südwestrundfunk. (2014, July 23). Historie des Bahnprojekts Stuttgart 21. [History of the train project Stuttgart 21]. Retrieved from <http://www.swr.de/landesschau-aktuell/bw/stuttgart21-chronologie-historie/-/id=1622/nid=1622/did=6730358/peyg96/index.html>
- Swami, V., Chamorro-Premuzic, T., & Furnham, A. (2010). Unanswered questions: a preliminary investigation of personality and individual difference predictors of 9/11 Conspiracist beliefs. *Appl. Cognit. Psychol.* *24*, 749–761. doi:10.1002/acp.1583
- Tolkien, J. (1954). *The lord of the rings (volume I to III)*. New York: Ballantine Books.
- Tracy, J. F. (2015, March). *The medium is the con(spiracy)*. Paper presented at the Conference on Conspiracy Theories, Miami, FL.
- Uscinski, J., Klofstad, C., & Atkinson, M. (2016). What drives conspiratorial beliefs? the role of informational cues and predispositions. *Political Research Quarterly*, *69*(1), 57–71. doi:10.1177/1065912915621621
- Uscinski, J. & Parent, J. (2014). *American conspiracy theories*. Oxford: Oxford University Press.

## References

- van der Tempel, J. & Alcock, J. E. (2015). Relationships between conspiracy mentality, hyperactive agency detection, and schizotypy: supernatural forces at work? *Personality and Individual Differences*, *82*, 136–141. doi:10.1016/j.paid.2015.03.010
- van Helsing, J. (1995a). *Geheimgesellschaften 2. Interview mit Jan van Helsing*. Rhede: Ewert.
- van Helsing, J. (1995b). *Geheimgesellschaften und ihre Macht im 20. Jahrhundert*. Rhede: Ewert.
- van Helsing, J. (2010). *Geheimgesellschaften 3. Krieg der Freimaurer*. Winterthur (CH): Amadeus Verlag.
- van Prooijen, J. W., Krouwel, A. P. M., & Pollet, T. V. (2015). Political extremism predicts belief in conspiracy theories. *Social Psychological and Personality Science*, *6*(5), 570–578. doi:10.1177/1948550614567356
- von Bieberstein, J. R. (1976). *Die These von der Verschwörung 1776–1945. Philosophen, Freimaurer, Juden, Liberale und Sozialisten als Verschwörer gegen die Sozialordnung*. Bern: Herbert Lang.
- Wachowski Brothers. (Director), & Silver, J. (Producer). (1999). *The Matrix*. Warner Bros.
- Wagner-Egger, P. & Bangerter, A. (2007). The truth lies elsewhere: correlates of belief in conspiracy theories. *Presses Universitaires de Grenoble*, *20*(4), 31–61. doi:10.1037/t333154-000
- Whedon, J., Greenwalt, D., Noxon, M., Kuzui, F. R., & Kuzui, K. (Producer). (1997–2003). *Buffy the vampire slayer*. 20th Century Fox Television.
- Whitson, J. A., Galinsky, A. D., & Kay, A. (2015). The emotional roots of conspiratorial perceptions, system justification, and belief in the paranormal. *Journal of Experimental Social Psychology*, *56*, 89–95. doi:10.1016/j.jesp.2014.09.002
- Wippermann, W. (2007). *Agenten des Bösen. Verschwörungstheorien von Luther bis heute*. Berlin: be.bra Verlag.
- Wood, M. J. & Douglas, K. M. (2013). What about building 7? A social psychological study of online discussion of 9/11 conspiracy theories. *Frontiers in Psychology*, *4*. doi:10.3389/fpsyg.2013.00409

## References

- Wood, M. J., Douglas, K. M., & Sutton, R. M. (2012). Dead and alive: beliefs in contradictory conspiracy theories. *Social Psychological and Personality Science*, 3(6), 767–773. doi:10.1177/1948550611434786
- Žižek, S. (1991). *Liebe dein Symptom wie dich selbst!* Berlin: Merve Verlag GmbH.
- Žižek, S. (2014). *Event*. London: Penguin Books Ltd (UK).
- Zunshine, L. (2006). *Why we read fiction: theory of mind and the novel*. Columbus: Ohio State University Press.



# A Cumulus

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## Thirty shades of truth: conspiracy theories as stories of individuation, not of pathological delusion

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Recent studies on conspiracy theories employ standardized questionnaires, thus neglecting their narrative qualities by reducing them to mere statements. Recipients are considered as consumers only. Two empirical studies—a conventional survey ( $n = 63$ ) and a study using the method of *narrative construction* ( $n = 30$ )—which were recently conducted by the authors of this paper—suggest that the truth about conspiracy theories is more complex. Given a set of statements about a dramatic historic event (in our case 9/11) that includes official testimonies, allegations to a conspiracy and extremely conspiratorial statements, the majority of participants created a narrative of 9/11 they deemed plausible that might be considered a conspiracy theory. The resulting 30 idiosyncratic stories imply that no clear distinction between official story and conspiratorial narrative is possible any more when the common approach of questionnaires is abandoned. Based on these findings, we present a new theoretical and methodological approach which acknowledges conspiracy theories as a means of constructing and communicating a set of personal values. While broadening the view upon such theories, we stay compatible with other approaches that have focused on extreme theory types. In our view, accepting conspiracy theories as a common, regulative and possibly benign phenomenon, we will be better able to understand why some people cling to immunized, racist and off-wall stories—and others do not.

**Keywords:** conspiracy theories, narrative construction, personality science, individual differences, external validity, regulation, psychological methods

### INTRODUCTION

“Superstition is actually a symptom of enlightenment, whoever is superstitious is always, [...] much more of a person; and a superstitious society is one in which there are many individuals and more delight in individuality”

(Nietzsche, 1882/1974, p. 96).

So far, many psychological studies on conspiracy theories have confined themselves to a simple—yet often misleading—paradigm: The assumption that a clear distinction between an official truth and delusive idiosyncratic explanations can be made, and that supporters of conspiracy theories must hence be considered as individuals who have lost touch with reality and are in need for clear-cut explanations. Unfortunately, this reproach of oversimplification also applies to the methods commonly used to investigate conspiracy theories: The frequent use of questionnaires implies that conspiracy theories can be reduced to simple statements and that recipients of conspiracy theories can be seen as passive consumers who can be “diagnosed” by specific items.

How do these basic assumptions account for the vast majority of conspiracy theories emerging from the highly interactive sphere of the new media? Why are conspiracy theories about 9/11 far more complex and disquieting than the official version if they are supposed to provide simple answers? Why are contradictory explanations for Princess Diana’s “disappearance”

deemed equally plausible (see Wood et al., 2012)? This contrasts Goertzel (1994) who noted that conspiracy thinkers “offer the same hackneyed explanation for every problem” (p. 741), and not several contradicting explanations for one discrete event. And finally: Why are conspiratorial plots nearly omnipresent in contemporary literature, in movies and on television? The entertainment value of conspiracies should also be taken into account when explaining the unsolicited, excursive, and mutating dissemination of such theories.

It seems that research on conspiracy theories has often emphasized cognitive peculiarities of people who adhere to conspiracy theories, suggesting that believers in conspiracy theories are specific cases who have not much in common with the majority of people. As such, the ordinary actor is often a blind spot of current research, as has recently been pointed out by Sapountzis and Condor (2013).

In sum, we feel that it is time to leave the beaten track and to acknowledge conspiracy theories as a vibrant phenomenon of popular culture which reflects far more than pathological delusions or xenophobic attitudes. Inspired by the ground-breaking work of Timothy Melley (2000) we interpret the increasing popularity of conspiracy theories as an attempt to emphasize a personal set of values and thus to organize and regulate one’s life experience in a meaningful way. According to Melley (2000), the general motif behind conspiracy theories is to emphasize the values of autonomy and individuality by inducing an intensive

## A.1 Thirty shades of truth

fear of being controlled by concealed external forces. For this state of mind Melley has coined the term “agency panic.” By suggesting that our personal freedom is at stake, conspiracy theories create awareness for the (potential) threats to human autonomy and individuality. At this point we transcend Melley by stating that the self-affirmative mechanism behind conspiracy theories should work for any set of values a person wishes to emphasize (e.g., freedom of speech, integrity of the traditional family, mental and physical health, etc.). Based on this hypothesis, we interpret the widespread doubt in an official truth and the great popularity of conspiracy theories as a crisis of ideologies that goes hand in hand with a crisis of individuality. Especially in pluralistic Western societies where the “grands récits” (Lyotard, 2005) of the past have lost their credibility, conspiracy theories can help to express and to share an individual system of values. When there is no generally accepted frame of reference any more, individuation is in need for alternative explanations.

From our point of view empirical studies on conspiracy theories have so far neglected the creative potential, the dynamic, the interactive, and the narrative qualities of conspiracy theories. The predominant paradigm of psychological research in the field of conspiracy theories assumes that a clear distinction between an official truth and delusive idiosyncratic explanations can be made. For instance, Lewandowsky et al. (2013) showed that taking the moon landing for a hoax is correlated with a disbelief in climate change and a rejection of the fact that smoking causes lung cancer. One can either believe that smoking causes lung cancer, or one might not. Furthermore, as the authors point out, this is not a question of belief in the first place; there is overwhelming scientific evidence for negative side effects of smoking. To deny them means to negate the validity of scientific knowledge in general. We deem it questionable that doubts about the reasons for the invasion of Iraq should generally be explained by the same cognitive mechanisms.

Belief or disbelief in theories of conspiracy has been examined by reducing stories to simple statements (e.g., “9/11 was an inside job”) that may serve as questionnaire items. First and foremost, these items are designed to meet the psychometrical requirements of questionnaire construction. Naturally, such questionnaire items cannot reflect the complex and diverse narrations entwined around ideas of conspiracy. We see dangers in applying this approach to investigating conspiracy theories: Without a psychological model, one can merely speculate which latent variable or construct was measured after all. It gets hard to distinguish possible facets of a trait—a supposed predisposition to accept conspiracy theories—*ex post* without such a model. Goertzel (1994) has already pointed to the weakness of questionnaire data when it comes to people’s belief systems.

For instance, Swami et al. (2010) were able to explain 53.1% of variance in “9/11 Conspiracist Beliefs” with a structural equation model including personality variables. Importantly, “General Conspiracy Beliefs” accounted for only 14.4% of variance. Wagner-Egger and Bangerter (2007) tried to identify predictors for belief in two types of conspiracy theories: Conspiracy theories that accuse minorities (Type A) and conspiracy theories blaming authorities (Type B). No less than 18 personality

constructs were included. Regression analysis showed that these constructs only accounted for less than 10% of variance in terms of Type A theories ( $R^2 = 0.09$ ), respectively, 16% of variance in terms of Type B theories ( $R^2 = 0.16$ ). Although these studies have clearly delivered important insights, up to 90% of variance is left unexplained.

Based on these findings and on our own questionnaire studies, we doubt whether these procedures are able to grasp the appreciation and fascination of such theories in full. The low to intermediary values of explained variance not only indicate that the approaches did not cover some important factors. We also do not know if a participant has merely adopted some overheard notions; or if he or she has arrived at a conspiratorial belief after time-consuming, extensive research. We also do not know if the conspiratorial belief is stable, or if new information would be regarded and integrated; if it is a merely personal opinion or if the believer is eager to share his or her view with others; and finally, if the belief would be guiding the person’s actions, e.g., if he or she would engage in political activities.

Apart from some recent studies—e.g., Sapountzis and Condor (2013) have evaluated the spontaneous use of conspiracy narratives in interviews of Greek citizens and Lewandowsky et al. (2013) investigated conspiracist ideation in the blogosphere—most studies have focused on the recipients of conspiracy theories using questionnaires and drawing an artificial red line between believers and disbelievers. To our understanding, this approach reveals some misleading basic assumptions about conspiracy theories: (a) Conspiracy theories are treated as invariant entities (b) that can be reduced to single statements and (c) that recipients of conspiracy theories can be regarded as passive consumers and (d) that believers are always believers independently from the “quality” of the regarding storyline. By contrast, we argue that a majority of conspiracy theories emerge from the highly interactive sphere of the new media. Today, millions of people around the world create, compile, discuss, and reproduce conspiracy theories on internet platforms, private websites, or blogs. This relentless process of creation, modification, and serial reproduction blurs the classic difference of a distinction of production (*sender*) and recipient. If our assumptions hold, people should—when given the chance—construct a wide variety of stories, differing greatly in conspiratorial characteristics. Questionnaires are hardly able to capture the narrative process of acquisition, compilation, and reproduction in an ecologically valid way. Consequently, we suggest the method of *narrative construction* as a new means to explore the multi-facet phenomenon of conspiracy theories. This method allows an individual to construct their own *story* for a given event like 9/11 from a set of pre-defined pieces of information.

If a conspiracy theory is a dynamic narration reflecting an individual’s values—built around a dramatic historic event—there should be a plethora of different theories, not only concerning the story’s nucleus, i.e., the historic event. The variety of personality should, according to this assumption, lead to an evenly manifold variety of conspiracy theories. Additionally, if it was a prevalent method of identity shaping, almost everyone should be prone to construct a conspiracy theory. We tested these assumptions empirically.

**THE PRESENT PAPER**

In the first section, we shortly describe a study that sought for a link between cognitive self-efficacy and the belief in common conspiracy theories—yet yielded no results. Subsequently, the method of *narrative construction*<sup>1</sup> is described. It was applied in a study with 30 participants. In the following section, we present the results of this study. Finally, we outline a theoretically framework which accounts for our findings and allows for an integration of other explanatory approaches. We then outline the common ground of our and other models and close with a short consideration of the dangers of conspiracy theories.

**METHODS**

In our first study on conspiracy theories, we followed the established research paradigm: A standardized questionnaire was applied to investigate the relationship between self-efficacy and belief in conspiracy theories. We shortly describe this study—that yielded no positive results—before we illustrate the method of narrative construction in detail.

In accordance with the premise that supporters of conspiracy theories share some kind of cognitive or emotional disposition, we expected people with a low level of self-efficacy to be more susceptible for any kind of conspiracy theory than people who reported a high level of self-efficacy.

**Method**

Our standardized questionnaire comprised the German version of the *General Self-Efficacy Scale* by Schwarzer and Jerusalem (1995). We modified some items to emphasize the cognitive component of self-efficacy. For example, the item “Thanks to my resourcefulness, I know how to handle unforeseen situations” was changed to “Thanks to my resourcefulness, I know how to interpret unforeseen situations.” In addition, a scale was designed for the assessment of endorsement in conspiracy theories. The scale consisted of 10 items. For each item, the gist of a popular conspiracy theory was condensed into a statement (e.g., “The terrorist attacks of 9/11 were planned and executed by the American government”). The participants were asked to rate the plausibility of each statement on a five-point Likert-scale ranging from 1 (“very implausible”) to 5 (“very plausible”).

**Sample**

Twenty-two males and 41 females participated in this study. The sample included students, workers and senior citizens. The age of the participants ranged from 18–76 years and the average age was 29.6 years ( $SD = 13.3$ ).

**Results**

The relation between self-efficacy and belief in conspiracy theories turned out to be non-significant, Pearson's  $r = -0.04$ ,  $p = 0.73$ , *n.s.* There was no pattern to be found, neither linear trends between variables nor higher-order relations by mere inspection

<sup>1</sup>Explained in more detail in a separate manuscript recently submitted to the same Frontiers Research Topic

of plotted data. The analysis of particular items and *ex-post-facto* attempts (splitting the sample by gender, by age, etc.) yielded no results.

**Discussion**

The data did not justify—or even suggest—the assumption that self-efficacy is related to endorsement in common conspiracy theories. Nevertheless, this finding is relevant. These results are well in line with the results of a study by Wagner-Egger and Bangerter (2007) which examined the link between locus of control and belief in conspiracy theories. The authors reported a low inter-correlation between externality ratings and belief in a particular type of conspiracy theories which accuses minorities ( $r = 0.15$ ;  $p < 0.05$ ). These findings clearly challenge the basic assumption that supporters of conspiracy theories must be considered as helpless individuals in need for clear-cut explanations. Left with no direction how to refine the hypothesis or the questionnaires, we decided to develop a new approach for exploring conspiracy theories

**THIRTY SHADES OF TRUTH: THE METHOD OF NARRATIVE CONSTRUCTION**

To analyze the phenomenon of conspiracy theories in an ecologically more valid way, we developed the method of *narrative construction*. Given a set of statements about an important event of contemporary history, people begin to build a narrative that is, for the most part, neither a pure official nor a clear conspiracy theory. Instead, people construct their idiosyncratic “shade of truth.” A more detailed description of this method can be found elsewhere<sup>1</sup>. In the present paper, we focus on a different aspect, but give a short account of material and procedure so the present paper is coherent and understandable.

To test our hypotheses that conspiracy theories are frequently occurring and that they are diverse and idiosyncratic stories built around an important event, we developed the method of “narrative construction.” Participants are provided with a deck of cards, each card bearing a statement related to a specified event (in our case 9/11). The deck was built to represent conspiracy-specific categories we had generated before with an inductive procedure. For each “fact,” there was one version (card) holding an official/canonical claim, one version bearing a mildly conspiratorial allusion, and one version holding a claim only compatible with an extreme conspiracy.

**MATERIAL FOR A NARRATIVE CONSTRUCTION**

To identify the typical constituents of conspiracy theories, we questioned 38 people to tell us which conspiracy theories they know of; and afterwards asked them to describe their favorite theory in detail. Subsequently, we asked “which elements are part of most conspiracy theories” as an open question. The answers were categorized by other interviewers; the resulting categories had to be defended in a discussion, as described by Mayring (2005), until all interviewers had agreed on a set of six categories for “elements of conspiracy theories,” including category definitions. The bottom-up generated items are *odd event*, *evidence*, *non-transparency*, *publicity*, *group of conspirers*, and *myth*. A more

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detailed description of this study and its results can be found elsewhere<sup>1</sup>.

We compiled 14 subsets for the deck of cards. With respect to the bottom-up derived elements of conspiracy theories: two for *group of conspirers*, one for *non-transparency*, one for *publicity*, three for *odd event*, three for *evidence*, and one for *myth*. Subset group consisted of three items (i.e., 3 cards) fueled with contents from typical (1) *official*, (2) *limited conspiratorial*, and (3) *unlimited conspiratorial* viewpoints. The *official* card always bore a category-related statement that was in accordance with official 9/11 reports and documents (drawing on respectable sources, e.g., governmental reports made public on the internet). For example, an official *group of conspirers*-item was: “9/11 masterminds were Islamist terrorists, led by Osama bin Laden, to attack the detested Western culture.”

The *limited conspiratorial* card was prepared with an item that contained an explanation describing a conspiracy of moderate strength. Specifically, this level was formed in accordance with Lutter’s (2001) categorization of conspiracies, corresponding to a conspiracy limited in time and space. This can also be thought as matching 9/11-view “let it happen on purpose” (“LIHOP” in the terminology of Ganser, n.d.). In this view, the Bush administration did not initiate the attacks but knew beforehand and did not take countermeasures. We compiled information from web resources like Wikipedia that matched this level. The “group of conspirers”-item here read: “The US administration had let happen the 9/11 attack to justify the wars in Afghanistan and Iraq.”

The *unlimited conspiratorial* card assumed a conspiracy with no clear bounds within space and time, or a “make it happen on purpose” (MIHOP) viewpoint in the sense of Ganser (n.d.) For example, it read: “The US administration had planned and conducted the 9/11 attack to justify the wars in Afghanistan and Iraq.”

This three-level graduation was realized for each subset of cards. Finally, for each of the six categories (odd event, evidence, non-transparency, publicity, group of conspirers, and myth), there was at least one three-part subset of cards (one card with an official statement, one limited conspiratorial, and one unlimited conspiratorial).

Additionally, we compiled a triplet of cards where all statements were completely off-wall:

- The group “Scholars for 9/11 truth” assumes that energy weapon fire, by killer satellites from outer space, led to the World Trade Center collapse.
- The former officer of nuclear intelligence and author Dimitri Khalezov postulates that the Twin Towers as well as building No. 7 were brought down by underground thermo-nuclear devices.
- The Syrian newspaper Al-Thawra has reported that 4000 Jewish WTC employees were warned beforehand and did not show up on work on 9/11.

The resulting 42 cards—13 canonical statements, 13 statements alluring to a limited conspiracy, 13 extremely/unlimited conspiratorial statements, and 3 off-wall assumptions—were

printed on cards (each around 10 × 6 cm; serif typeface, 12 pt. size, black letters on white ground) and laminated.

### PARTICIPANTS

Thirty persons (26 female,  $M_{\text{age}} = 22.4$  years, range: 19–55 years) took part in the study. Some were students at the University of Bamberg and received course credit for participation; they were naïve to the aim of the study and had not been involved in any other study described in this paper. The participants were randomly assigned to two groups: (1) *modest contents group* and (2) *extreme contents group*. The first group received the off-wall, the canonical, and the limited conspiratorial items only. The extreme contents group was handed out the full set including the 13 unlimited conspiratorial items. The split-up was done to test a hypothesis not discussed in this paper.

### PROCEDURE

The *modest contents group* was handed out a card deck with 29 items, containing all *official* and *limited conspiratorial* items (plus the three-card subset absurd). The *extreme contents group* received the same deck and additionally 13 *unlimited conspiratorial* items. All were asked to “construct a plausible story of the events of September 11th 2001, as a single coherent story or consisting of coherent or controversial fragments,” without time restrictions. When the participant had considered the story finished, the chosen items and their layout were written down. The participant was then asked to rate “how plausible the 9/11 story version just laid out is” on a five-point Likert-scale (among other questions related to other hypotheses). Overall, the participants spent 21 min on average to construct their story, with a range from 8 min to well over 30 min.

### RESULTS

We will present quantitative data analysis first. In order to acknowledge the diversity in story content, we will then present three single cases, i.e., three individual theories about 9/11.

### STATISTICAL ANALYSIS

We found no significant differences between groups with regard to the number of items taken from the off-wall set, tested by separate One-Way Analyses of Variance (ANOVA),  $F_{(1, 28)} < 1$ ,  $p = 0.836$ , *n.s.*; with regard to self-rated plausibility of the story,  $F_{(1, 28)} < 1$ ,  $p = 0.451$ , *n.s.*; and with regard to the number of cards selected in total,  $F_{(1, 28)} < 1$ ,  $p = 0.80$ , *n.s.* In the aspects relevant for the argumentation and discussion here the groups do not differ, so we will aggregate both samples to a single one. Detailed further analyses on the given data set can be found elsewhere<sup>1</sup>.

On average, participants used 14.80 statements/cards ( $SD = 5.47$ ; range: 5–28 cards) to construct a story, 0.50 cards ( $SD = 0.86$ , range: 0–3) of them were from the off-wall set. The average self-rated plausibility was 3.90 ( $SD = 0.71$ , range: 2–5).

There was a wide variety of length and content with regard to the theories produced. No two stories were alike; instead, highly idiosyncratic mixtures of statements were created. **Figure 1** gives an impression of the diversity of compositions.

To reduce complexity and to test our hypotheses, we segregated the stories according to the share of official vs. limited and

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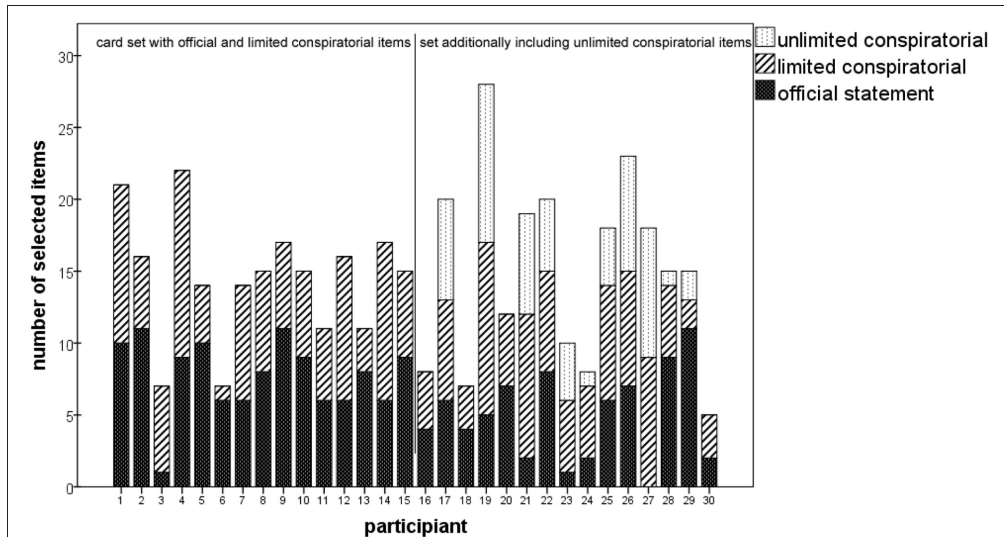


FIGURE 1 | Each participant created a unique story, blending official, limited, and unlimited conspiratorial items to build a plausible 9/11 narrative.

unlimited conspiratorial items. Here, we regard stories containing less than 33% conspiratorial items to be an “official version” of 9/11. Stories containing between 33 and 66% conspiratorial content were classified as a “hybrid version.” When more than 66% conspiracy-items were present, we considered the narrative as a “conspiracy version.”

With this deliberate categorization, 5 out of 30 stories (16.7%) qualified as official, 16 out of 30 stories as hybrid (53.3%), and the 9 remaining stories (30.0%) as conspiracy versions. We could neither detect a significant correlation between the self-rated plausibility and the number of off-wall items selected ( $r = 0.28$ ,  $p = 0.88$ , *n.s.*) nor between plausibility and the number of items selected in total ( $r = -0.09$ ,  $p = 0.62$ , *n.s.*). Regarding the content of the off-wall items, the killer satellites from outer space were present in three stories. Nine times, the thermo-nuclear devices were part of a story. The allegation of Jews knowing about the attacks beforehand was selected four times.

### A GAME OF CONSPIRACIES: EXAMPLES FOR 9/11 NARRATIVES

So far, we have analyzed only superficial information (e.g., number of items; composition of different item categories) of the generated versions. To understand the stories behind these numbers, we present three examples in detail (yet, each example is an abridged version; the full narratives were at least twice the length). We begin with a corner-case, the most canonical version that was produced. We proceed with a typical hybrid version that integrates many official statements as well as some propositions indicating a possible cover-up. Finally, we give an account of the most extreme conspiracy version that was built.

**A canonical story:** *On 9/11, four passenger planes got hijacked by Islamist suicide attackers; two of these planes were directed into the WTC twin towers. The resulting structural damage to the buildings led to their collapse. When President Bush was told about the second plane crashing into the towers, he kept sitting for five minutes—with countenance unaffected and seemingly not surprised—in front of the class at school, without interrupting the visit. On the day of the attacks, there was great confusion among the leading action forces. The chain of command expended too much time, as the US administration was not prepared for this kind of attack. Thus, the plane heading for the Pentagon could not be brought down in time. The 9/11 course of events was examined by several US agencies, supporting the official view. This was written down, for example, in the ‘9/11 Commission Report’.*

This is an abridged version of the only story (out of the sample of 30) that contains virtually no allegation to any conspiracy or cover-up. The originator, a 20-year-old woman, used seven items in total. Subsequently, she rated her story as most plausible (5 out of 5 points). The participant stated that she had “little interest on the issue of 9/11,” and that she had “recognized conspiratorial items,” but had discarded them as being “too speculative”; furthermore, she stated to have heard “about the unreliability of eye-witness in a lecture” some days before, and stated this might have made her “more cautious.”

**A hybrid theory:** *The 9/11 perpetrators had been Islamist terrorists under guidance by Osama Bin Laden to attack the hated “West”. Islamist terrorists had hijacked four passenger planes, two of which were directed into the twin towers. Standard operating procedures for hijackings were bureaucratic and chain of command operated*



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*slowly. There were lapses, failures, and precious time was lost. There should be further inquiries to clear up the countless open questions. The attack on Pearl Harbor was let happen by the US administration to get the own, war-weary people into WW II. Similar could have happened on 9/11.*

This is the abridged version of a typical hybrid story, constructed by a 25-year-old woman. The narrative combines official as well as mildly/limited conspiratorial items. While Islamist terrorists are identified as perpetrators, the possibility of a government letting happen the attack is included in the narrative. The creator of the story rated her story with 4 on the 5-point plausibility scale afterwards.

**A conspiracy theory:** *The US administration has initiated 9/11 itself, to justify the wars in Afghanistan and Iraq. There should be further inquiries to clear up the countless open questions. The US administration is lying. It was lying about the supposed nuclear weapons in Iraq, about Vietnam, Watergate, about many things. Why should one believe the 'official' 9/11 story? The WTC towers had been built with fire-resistant steel. The question remains: How could the towers had collapsed? The magazine Newsweek was reporting that high rank Pentagon officials had canceled flights scheduled for 9/11. According to the Syrian newspaper Al-Thawra, 4,000 Jewish employees did not show up at work on 9/11; they had been warned. There was and is one constant in the USA's policy: lie, deceit, and deception of her enemies and the public. This can be seen with Pearl Harbor, Watergate, the landing on the moon, and in recent times the 9/11 attacks.*

This is the abridged version of the story constructed by a 26-year-old woman. She was the only participant to include not a single item from the pool of official statements, using nine mildly/limited and nine extremely/unlimited conspiratorial items. Concerning plausibility, she rated her story with 4 afterwards.

### DISCUSSION

The multiplicity in the content of conspiracy theories that was predicted by our assumption is clearly reflected by the obtained data. There was no dichotomy between official and conspiratorial; instead, we found “thirty shades of truth.” There was no restriction regarding the combination of items, and the statements stemmed from real-world sources and had not been fitted for representativeness (regarding the levels official, limited, and unlimited conspiratorial). We therefore cannot infer a strict rank ordering of the stories. Our deliberate trifold categorization must hence be considered a rough measure. Yet, regarding the shares of official and conspiratorial items, our data shows the tendency to construct conspiracy theories, although in most cases, moderate ones. Interestingly, the only strictly canonical story was deliberately constructed by a person that reported to have no great interest in the matters of 9/11.

Furthermore, in the short survey after the experiment, many participants stated that it was *fun* to compile an explanation for the events on 9/11, while the plausibility of the stories was high, assessed by ratings afterwards. In our view, this is a strong argument for ecological validity; it implies that people were engaged in a cognitive as well as an emotional way.

A possible limitation can be seen in the fact that we asked German people to construct a 9/11 narrative; for sure, a sample from the USA would yield other results. Yet, our goal was to induce active story construction, so we deliberately chose this topic: We could be sure every participant knew of this event; and at the same time we could be fairly sure there was no personal involvement—in a sense that a participant might have known one of the 9/11 victims personally.

The hypothesis that people with a low feeling of security are particularly prone to conspiracy theories—a hypothesis derived from the literature (e.g., Goertzel, 1994)—was not confirmed by the data of our first study. Statistical power was not sufficient to refute this hypothesis in general, but low self-efficacy at least does not seem to be a major factor. General racist beliefs as common drivers for conspiracies (e.g., Grüter, 2010) did not appear to be a relevant factor of influence with our sample, either. Only a minority (4 out of 30) chose to integrate the card claiming that Jews knew of the attacks beforehand into their storyline. The item explicitly ascribed the statement to a Syrian newspaper, so choosing it would have left a cognitive back door—the anti-Semitic allegation could be attributed to the source; hence, picking this card could be justified in the sense of “I do not believe it, but I believe that a Syrian newspaper wrote it.” The claim that thermo-nuclear devices had been mounted in the Twin Towers seemed to be more plausible, as it was chosen by nine participants.

In sum, two of the most common explanations for inter-individual differences in terms of conspiracy endorsement—need for security and racist attitudes toward minorities—could not be confirmed as driving factors. What, then, could be motifs to construct conspiracy theories? In the following sections we present a theoretical framework which accounts for the subtle “shades of truth” revealed by *narrative construction*, as well as the common deficit-oriented approaches focusing on extreme tendencies of conspiracy beliefs. This theoretical framework is based on the assumption that conspiracy theories are means to express personal beliefs and values, to relate these values to contemporary history, and to engage in discussions about values and agency.

Our method of narrative construction does not aim at measuring a latent variable as, by contrast, an intelligence test does. Instead, its purpose is to initiate a *process* in an ecologically valid way. Thus, we cannot determine reliability in the sense of classical test theory. Stability, as a special case of reliability, will have to be determined in a further study. If our hypothesis holds and conspiracy theories are a means of expressing one's personal values, this does not imply that a participant chooses exactly the same items on the following day. Nevertheless, it implies that the set of values reflected by this individual's stories should remain stable even over the course of months or years.

Our next step will be to address reliability in terms of stability, as it is crucial for our claims. A data-driven system of analysis will be designed to categorize the beliefs and values implied by a story. Moreover, participants will be asked to state their most important values explicitly. By employing a longitudinal design changes and invariants will be examined.

## A.1 Thirty shades of truth

### THE TWILIGHT OF MYTH

The universality of certain narrative patterns and symbols has already been pointed out by Sigmund Freud and Carl Gustav Jung. They hypothesized that the exploration of myths—individual stories like dreams as well as universal ones—is a *via regia* for understanding the human psyche. Different academic disciplines try to fathom out the universality of myth and religion, emphasizing an interplay of nature and culture (Burkert, 2009) or cognitive operators that were shaped by evolution (Newberg et al., 2003). According to Bischof (1998), the structural universality of myths about world creation can be explained without assuming a collective unconscious. He argues that myths about world creation reflect the development of consciousness every individual experiences during early ontogenesis.

The existence of myths was a cultural constant and served to exemplify and consolidate group norms. The advent of the “self-expressive individual” (Campbell, 2008), however, rendered these myths meaningless and left the individual in the dark about desirable goals in life. With the beginning of enlightenment, assigning an individual his or her place in society by a story has begun to lose its importance. In return, the individual has to bear the burden of shaping society: “It is not society that is to guide and save the creative hero, but precisely the reverse. And so every one of us shares the supreme ordeal—carries the cross of the redeemer—not in the bright moments of his tribe’s great victories, but in the silence of his personal despair” (Campbell, 2008, p. 337).

When stories, oral and written, have been the primordial and most important means to negotiate the relation between individual and society, we might assume that the means might prevail, even when the focus changes. It is desirable to know one’s own motifs. At least, we deem it worthwhile to take this stance—and to see if it will be generative. Consequently, we will consider conspiracy theories as narrations that help people to recognize themselves, to define and express their system of values, and also to help them to articulate their demands on society. This does not necessarily imply that conspiracy theories are modern myths. In the first place, they are stories intertwined with defining society and ourselves; and successors of stories called myths, which had a distinctly different function, and distinctly different structural features.

A similar viewpoint was taken by Kelley-Romano (2008). She examined the television series *The X-Files* and concluded that the function of ubiquitous conspiracy in the series “defines what it means to be good or evil and simultaneously questions the process of identity formation itself” (Kelley-Romano, 2008, p. 106). Although the author recognized the psychological functions of the series’ conspiratorial motives as crucial for its success, she did not describe the psychological parts of her theory in more detail.

Today, identity formation (at least in Western cultures) might be considered as the challenge to *shape* society and oneself. This does not necessarily have to be a painful process. For some, anxiety and a loss of control might be predominant, probably those of them who show a low degree of ambiguity tolerance in the sense of an “emotional and perceptual personality variable” (Frenkel-Brunswick, 1949). Some will meet this challenge with indifference. For others, it might appear as a playful and exciting endeavor to shape one’s identity, probably on basis of the mere attempt to

bring order into the story (see the “Aesthetic Aha” effect in Muth and Carbon, 2013), although a final solution might not be the ultimate source of reward (Muth and Carbon, 2013; Muth et al., in press). Embracing this full range might help to understand why conspiracy theories are not a well-separated niche of psychology and society—but, according to our data, pervasive.

### SHAPING THE PILLARS OF THE SELF

Dan McAdams assumed that “we are all tellers of tales” (McAdams, 1993) by the mere fact. Tales appear to him as a means to achieve self-insight, as a very basic way of organizing information—and a way to share this information, also about the coordinates of oneself within the society, in the world. McAdams integrates biological, developmental and cognitive aspects to explain why certain characters (like the Teacher, the Warrior, the Maker, the Friend, and the Survivor) frequently appear in such stories. During adolescence certain questions arise. For instance: “What is good? What is true? What is beautiful? How does the world work? How should the world work?” (McAdams, 1993, p. 82) The benefit of stories for self-awareness, their potential to render non-conscious ideas and values explicit, is also emphasized by Wilson (2002).

Right after puberty, stories like legends and myths are replaced by “theories and creeds and other systematic explications” (McAdams, 1993, p. 85). Such theories offer the opportunity to define the goodness (and badness) of very specific actions, and to evaluate them. The acquired belief and value system is likely to stay—with changes in detail—for the rest of one’s lifetime forming the basis for the story that reflects and forges our self in adulthood.

It is noteworthy that a theory “impressively differentiated and integrated” (McAdams, 1993, p. 90) might be considered “particularly mature, advanced and enlightened” (p. 90). McAdams did not have conspiracy theories in mind; from a formal point of view, however, conspiracy theories also match his criteria. Particularly, the high degree of differentiation is one of the most striking features of conspiracy theories. We also observe that several story parts of a conspiracy theory are imperatively held together, at least by *ad-hoc* explanations or flexible interpretations of several parts toward a coherent Gestalt. This is also an important difference between a conspiracy “theory” and a truly scientific theory—the first one might be driven and put together by scientifically invaluable arguments but will yield a story which attracts people and which invites to fill the logical gaps by own considerations. This will raise the mere consumer to the position of the narrator and the creator her/himself.

The shift from society to the individual when it comes to defining values, however, should not be seen as a burden alone. Gergen (2006) sums up a debate about the consequences of emphasizing the distinction between oneself and the others: Becoming an individual implies the danger of isolation and alienation. Melley (2000) makes a similar point by hypothesizing that a certain amount of paranoia is not only a defense, but even a part of liberal individualism.

In *La condition postmoderne*, Jean-Francois Lyotard claims that the collapse of the grand narratives does not necessarily imply an atomization of society. Being part of a fabric of relations, even



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“the most underprivileged self” (Lyotard, 2005, p. 55) is not powerless in the language games of global communication. The self can treat messages as if it were the sender, the receiver, or the relator (Lyotard, 2005). Likewise, a conspiracy theory is an invitation to receive information, to share information, and also to add new information, in the end: to be a part of the generation and evolution process of a story.

Thus, conspiracy theories offer a further dimension interesting from a psychological standpoint. They offer the possibility to transfer one’s value system into the social domain: According to Mason (1997), the moral self must learn to discern the values held by other persons and institutions; and should encourage others to act morally. Fivush and Buckner (1997) argue that language is not only a medium, but is both necessary to construct a self-concept and to engage in moral-based interaction with others. From this point of view, making stories that describe the ethics of institutions as well as one’s own is not a possibility, but a necessity in moral development. Also, sharing these narratives is desirable.

A conspiracy theory, thus, could be seen as a differentiated story of our beliefs and values helping us to understand and express our non-conscious moral feelings. Historic or contemporary events and developments which threaten these values may become the initial nucleus for such a story. The need to construct such a story arises from living in a society where the generally acknowledged goal of individuation is no longer a mere adoption of common beliefs, but where becoming individual is the preferred goal.

Furthermore, a conspiracy theory would allow us to share our beliefs with others and to make us (and others) cautious about the violation of ethical standards. Horstmann (2012) even hypothesizes that apocalyptic scenarios, for example about World War III, are the main reason such scenarios have not become reality so far. Narratives about dystopian developments make us aware of such developments in the first place.

Likewise, in conspiracy theories such scenarios are a common topic. This need not end in a feeling of helplessness, or, as Melley (2000) termed it, agency panic. A conspiracy theory might be considered as a remedy; yet, not only in the way described by Melley as a defense mechanism of individualism: social exchange about a supposed conspiracy is comforting and reassuring. Taking part in such language games requires a widely known story nucleus (e.g., the terrorist attacks of 9/11), so others recognize the importance of the story and can affiliate. We might consider a good conspiracy theory as a kind of interface to find like-minded people and to overcome alienation.

### THE CONSPIRACY CODE

So far, we have considered:

- The importance of stories, to be more precise, of mythical stories, in human history.
- The importance of stories that mirror a person’s belief and value system as a means of individuation. They explicate what is good or bad and can be considered helpful to shape one’s value system by organizing one’s life experience in a meaningful way.

- The potential to find like-minded people by engaging in the active exchange of value-expressing stories.

However, the psychological importance of narratives does not explain: Why is a *conspiracy* theory a method of choice? A story about morale, i.e., what is right and wrong, will necessarily include both moral extremes. A rivalry between good and bad allows the storyteller to make clear which side he or she is on. However, it would be comforting if evil deeds are done by a manageable part of society, not by the majority; otherwise, one would cast himself an outsider. Additionally, these deeds must be concealed, too; in other respects, the majority of society would have noticed and would either approve of these deeds, or be indifferent. Both options would be discomfoting.

Here we meet with existing approaches to the phenomenon of conspiracy theories. Many observed features suit perfectly with our assertions sketched here:

- An immunization against counter-evidence makes a narration invulnerable. If the story reflects a person’s most important beliefs and values, it is quite understandable why immunization is desirable.
- Four people had selected the item alleging to a Jewish involvement. The result suggests that anti-Semitic beliefs were present in our sample; but four out of 30 people might indicate that xenophobia is not the heart of every conspiracy theory. Yet, a conspiracy is in need for conspirers. We acknowledge the danger that some people might rely upon existing stereotypes—e.g., prejudice about Jews or Muslims. Exploiting such biases would indeed be a result of, not a reason for, conspiracy theories. An exemption would be a person who holds racist beliefs as most important conviction. The whole theory would be built around these convictions then—and mirror the psychological motifs described by Moscovici (1987).
- A powerless and underprivileged person might be in need to understand why he or she has failed in life; that means him or her as a person, with beliefs about right and wrong. We indeed could expect him or her to construct a rather extreme narrative that mirrors the severity of his failure in life. Here, attributional mechanisms to uphold the belief in a just world (Lerner, 1980) would be relevant, as described by Farr (1987).

Of course, a highly immunized, racist, and extreme conspiracy theory stands out. It attracts the attention of society and, consequently, of psychologists—and we indeed need to understand and explain the person behind such stories. In our sample, at least the one conspiracy theory we have stated in detail here would qualify for this extreme. But aside from this extreme shade of truth: there were 29 stories that demand deeper and more differentiated psychological analysis. When we regard conspiracy theories as a continuum of identity-shaping potential, the phenomenon is demystified. This will be an important step toward the appreciation “to what extent conspiracy theories reflect everyday cognitions” (Swami and Coles, 2010, p. 563).

This, of course, does not render research on individual differences useless. Actually, this specific research is highly relevant for our approach. Stories in general—and life stories in

## A.1 Thirty shades of truth

particular—are highly intertwined with a storyteller's personality. We assume that individual values determine the content of a conspiracy theory. We further assume that personality moderates if this theory is, for example, open for new evidence or highly immunized. Consequently, we suggest to further explore and analyze these interdependencies between *content* and *shape*. The mere *form*—a story about secret and potentially harmful deeds—would then be of lesser psychological relevance.

However, we must not neglect the fact of the harmful potential these theories bear. Considering them as an omnipresent and—in

principle—benign psychological phenomenon helps us to explore why some people fall for extreme conspiratorial constructs of ideas which might lead to xenophobic or even racist arguments. It might also help us to understand how agitators deliberately use conspiracy theories to transport hateful ideology—wrapped up in a plausible plot that masks these foul intentions (Byford and Billig, 2001; Wood and Finlay, 2008). The question should not be: Why does one believe a racist *conspiracy theory*? Rather, we should ask: Why does one believe a *racist* conspiracy theory?

### REFERENCES

- Bischof, N. (1998). *Das Kraftfeld der Mythen. Signale aus der Zeit, in der wir die Welt erschaffen haben [The force field of myths]*. München: Piper.
- Burkert, W. (2009). *Kulte des Altertums. Biologische Grundlagen der Religion [Worship of antiquity]*. München: C. H. Beck.
- Byford, J., and Billig, M. (2001). The emergence of antisemitic conspiracy theories in Yugoslavia during the war with NATO. *Patterns Prejudice* 35, 50–63. doi: 10.1080/003132201128811287
- Campbell, J. (2008). *The Hero with a Thousand Faces*. Novato, CA: New World Library.
- Farr, R. M. (1987). "Self/other relations and the social nature of reality," in *Changing Conceptions of Conspiracy*, eds C. F. Graumann and S. Moscovici (New York, NY: Springer), 203–217. doi: 10.1007/978-1-4612-4618-3\_12
- Fivush, R., and Buckner, J. (1997). "The self as socially constructed: a commentary," in *The Conceptual Self in Context. Culture, Experience, Self-understanding*, eds U. Neisser and D. A. Jopling (Cambridge: Cambridge University Press), 176–181.
- Frenkel-Brunswik, E. (1949). Intolerance of ambiguity as an emotional and perceptual personality variable. *J. Pers.* 18, 108–143. doi: 10.1111/j.1467-6494.1949.tb01236.x
- Ganser, D. (n.d.). 911 Untersuchungen [Investigating 9/11]. Available online at: <http://911untersuchen.ch/wissenschaft/daniele-ganser/> [Accessed March 1, 2013].
- Gergen, K. J. (2006). The relational self in historical context. *Int. J. Dial. Sci.* 1, 119–124.
- Goertz, T. (1994). Belief in conspiracy theories. *Polit. Psychol.* 15, 731–742. doi: 10.2307/3791630
- Grüter, T. (2010). *Freimaurer, Illuminaten und andere Verschwörer: Wie Verschwörungstheorien funktionieren [Freemasons, Illuminates and Other Conspirators: How Conspiracy Theories Work]*. Frankfurt am Main: Fischer.
- Horstmann, U. (2012). *Zur Abschreckungskunst. Zur Ehrenrettung der apokalyptischen Phantasie [The Art of Deterrence]*. München: Wilhelm Fink.
- Kelley-Romano, S. (2008). Trust no one: the conspiracy genre in American television. *Southern Commun. J.* 73, 105–121. doi: 10.1080/10417940802009509
- Lerner, M. J. (1980). *The Belief in a Just World. A Fundamental Delusion*. New York, NY: Plenum. doi: 10.1007/978-1-4899-0448-5
- Lewandowsky, S., Cook, J., Oberauer, K., and Marriott, M. (2013). Recursive fury: conspiracist ideation in the blogosphere in response to research on conspiracist ideation. *Front. Psychol.* 4:73. doi: 10.3389/fpsyg.2013.00073
- Lutter, M. (2001). *Sie kontrollieren alles! Verschwörungstheorien als Phänomen der Postmoderne und ihre Verbreitung über das Internet [They Control Everything! Conspiracy Theories as Phenomenon of the Post Modern Time and Their Dissemination to the Internet]*. Munich: Edition Fatal.
- Lytard, J.-F. (2005). *Das postmoderne Wissen [Postmodern Knowledge]*. Wien: Passagen Verlag.
- Mason, S. (1997). "The self and contemporary theories of ethics," in *The Conceptual Self in Context. Culture, Experience, Self-understanding*, eds U. Neisser and D. A. Jopling (Cambridge: Cambridge University Press), 233–248.
- Mayring, P. (2005). *Neuere Entwicklungen in der qualitativen Inhaltsanalyse [New Developments for Qualitative Research and the Qualitative Content Analysis]*, eds P. Mayring and M. Gläser-Zikuda (Weinheim: Beltz), 7–19.
- McAdams, D. P. (1993). *The Stories We Live By: Personal Myths and the Making of the Self*. New York, NY: William Morrow and Company.
- Melley, T. (2000). *Empire of Conspiracy: The Culture of Paranoia in Postwar America*. Ithaca, NY: Cornell University Press.
- Moscovici, S. (1987). "The conspiracy mentality," in *Changing Conceptions of Conspiracy*, ed C. F. G. A. S. Moscovici (New York, NY: Springer), 151–169. doi: 10.1007/978-1-4612-4618-3\_9
- Muth, C., and Carbon, C. C. (2013). The Aesthetic Aha: on the pleasure of having insights into Gestalt. *Acta Psychol. (Amst)* 144, 25–30. doi: 10.1016/j.actpsy.2013.05.001
- Muth, C., Pepperell, R., and Carbon, C. C. (in press). Give me Gestalt! Preference for Cubist artworks depicting highly detectable objects. *Leonardo*. [Epub ahead of print].
- Newberg, A., D' Aquili, E., Rause, V., and Stadler, H. (2003). *Der gedachte Gott: Wie Glaube im Gehirn entsteht [The Imagined God]*. München: Piper.
- Nietzsche, F. (1882/1974). *Die fröhliche Wissenschaft [The Gay Science]*. New York, NY: Random House.
- Sapountzis, A., and Condor, S. (2013). Conspiracy accounts as intergroup theories: challenging dominant understandings of social power and political legitimacy. *Polit. Psychol.* doi: 10.1111/pops.12015. [Epub ahead of print].
- Schwarzer, R., and Jerusalem, M. (1995). "Generalized self-efficacy scale," in *Measures in Health Psychology: A User's Portfolio. Causal and Control Beliefs*, eds J. Weinman, S. Wright, and M. Johnson (Windsor: NFER-NELSON), 35–37.
- Swami, V., Chamorro-Premuzic, T., and Furnham, A. (2010). Unanswered questions: a preliminary investigation of personality and individual difference predictors of 9/11 conspiracist beliefs. *Appl. Cogn. Psychol.* 24, 749–761. doi: 10.1002/acp.1583
- Swami, V., and Coles, R. (2010). The truth is out there. *Psychologist* 23, 560–563.
- Wagner-Egger, P., and Bangertner, A. (2007). The truth lies elsewhere: correlates of belief in conspiracy theories. *Rev. Int. Psychol. Soc. Int. Rev. Soc. Psychol.* 20, 31–61.
- Wilson, T. D. (2002). *Strangers to Ourselves: Discovering the Adaptive Unconscious*. Cambridge, MA: Harvard University Press.
- Wood, C., and Finlay, W. M. L. (2008). British National Party representations of Muslims in the month after the London bombings: homogeneity, threat, and the conspiracy tradition. *Br. J. Soc. Psychol.* 47, 707–726. doi: 10.1348/014466607X264103
- Wood, M. J., Douglas, K. M., and Sutton, R. M. (2012). Dead and alive: beliefs in contradictory conspiracy theories. *Soc. Psychol. Personal. Sci.* 3, 767–773. doi: 10.1177/1948550611434786

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# M<sup>5</sup>oX: Methoden zur multidimensionalen und dynamischen Erfassung des Nutzererlebens

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## 1 Dimensionalität und Dynamik des Nutzererlebens

Wie erleben wir Design? Welche kognitiven, affektiven und körperlichen Bestandteile zeichnen dieses Erleben aus? Welche Faktoren spielen bei der Bewertung und Nutzung von Objekten eine Rolle? Wie verändern sich Präferenzen von Objekten oder Kunstwerken im Laufe der Zeit? Diese Fragen verweisen auf verschiedene Perspektiven des Nutzererlebens, die spezifische methodologische Ansätze erfordern. Einerseits variiert hierbei die Erfassung in der Dimensionalität des Erlebens, andererseits wird sie in unterschiedlichem Maße der Dynamik des Erlebens gerecht (aufgeschlüsselt in Abbildung 1).



Abbildung 1: Multidimensionalität und Dynamik als Facetten der User Experience.

Wir stellen im Folgenden verschiedene Arten der methodischen Erfassung des Nutzererlebens unter diesen Gesichtspunkten dar und präsentieren konkrete Beispiele des Einsatzes kontinuierlicher Messungen.

## 1 Eine Toolbox für verschiedene Facetten des Nutzererlebens

Die Erfassung von Produkt- oder Nutzereigenschaften mittels expliziter Abfrage durch Fragebogen, aber auch durch indirekte Erfassung impliziter Haltungen zu Produkten [beispielsweise über Reaktionszeiten bei Assoziationsaufgaben durch den Test „md-IAT“ (Gattol, Sääkjärvi, & Carbon, 2011)] ermöglicht die Abbildung multidimensionaler Faktoren des Nutzererlebens. Veränderungen innerhalb des Erlebens lassen sich allerdings erst durch den Vergleich mehrerer Testzeitpunkte feststellen. Vor allem im Bereich des Designs und der Kunstbetrachtung spielen solche dynamischen Prozesse eine große Rolle: Bei der Erfassung des Gefallens von Produkten während eines einzigen Zeitpunkts schneiden beispielsweise innovative im Vergleich zu vertrauten Stimuli schlechter ab (Reber, Schwarz, & Winkelman, 2004), während bei wiederholter Abfrage nach einer intensiven Beschäftigung mit dem Material ein Anstieg der Präferenz innovativer Designs zu verzeichnen ist (Carbon & Leder, 2005). Die Methode der „Repeated Evaluation Technique (RET)“ (Carbon & Leder, 2005) erfasst in der Minimalversion mit zwei Messzeitpunkten bereits Veränderungen verschiedener Variablen der Wertschätzung: höhere Wiederholungsraten ermöglichen ein feineres zeitliches Abbild [bspw.  $k=4$  in Carbon, Faerber, Gerger, Forster, & Leder (in press)]. Während sich, wie von Zajonc (1968) als „Mere-Exposure Effect“ beschrieben, Präferenzen bereits aufgrund mehrfacher bloßer Präsentation eines Stimulus ändern, konnten Muth und Carbon (2013) mit dem „Aesthetic Aha“-Effekt zeigen, dass nicht nur die Präsentationshäufigkeit, sondern vielmehr die Dynamik des Erkennens eine Rolle spielt: Nur direkt nach einer perzeptuellen Einsicht (in Form plötzlicher Gestalterkennung) stieg das Gefallen und nach Gefallen bewertet, um eine wiederum feinere Abbildung der Prozesse zu ermöglichen und so einen bisher verborgenen Zusammenhang aufzudecken. Die nächste Stufe der zeitlichen Auflösung von dynamischen Prozessen des Erlebens stellen Erfassungsmethoden dar, die den temporalen Aspekt des Erlebens abbilden. Sie werden exemplarisch im nächsten Kapitel beschrieben.

Abbildung 2 veranschaulicht den Zusammenhang der hier präsentierten Erfassungsmethoden mit den oben beschriebenen Facetten des Erlebens: Multidimensionalität und Dynamik. Mit der Abbildung dynamischer Prozesse gehen Einschränkungen der Erfassung von Multidimensionalität einher. Während zwei Messzeitpunkte noch ausführliche Befragungen und Testungen ermöglichen [bspw. 6 Dimensionen in Faerber, Leder, Gerger, & Carbon (2010)], muss bereits bei fünf Messzeitpunkten mit hohem Zeitaufwand und Störfaktoren wie Langeweile, Frustration und Ermüdung gerechnet werden, soll Multidimensionalität gewährt bleiben. Die Erfassung mittels kontinuierlicher Messmethoden ist im Falle von beispielsweise der Posturographie, der Hautwiderstandsmessung oder auch dem Eye-tracking auf eine Modalität beschränkt. In Kombination mit anderen Methoden ermöglicht sie allerdings Multidimensionalität bezüglich der Prozessmodalitäten (wie affektive und kognitive Modi, siehe Abbildung 1) – beispielsweise durch die Erfassung des Hautwiderstands während einer kognitiven oder perzeptuellen Aufgabe. Im Folgenden stellen wir anhand von drei Studien beispielhaft verschiedene kontinuierliche Messmethoden vor und diskutieren Vor- und Nachteile für Fragestellungen aus dem Bereich des Nutzererlebens.

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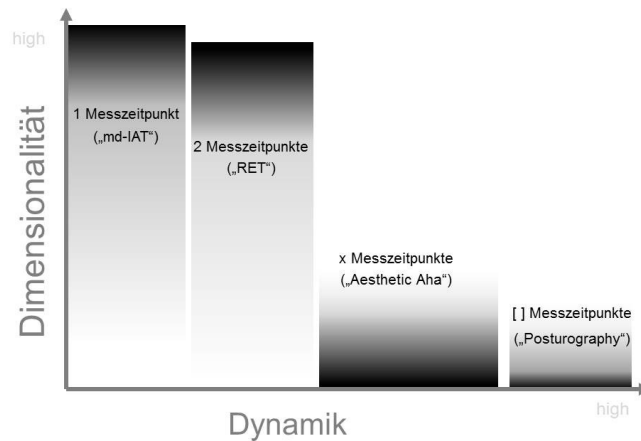


Abbildung 2: Verschiedene Erfassungsmethoden und ihre Positionierung hinsichtlich Dimensionalität und Dynamik des Nutzererlebens. Während ein Messzeitpunkt hohe Multidimensionalität ermöglicht, wird sie mit steigender Abbildungsfähigkeit dynamischer Prozesse geringer. In Klammern werden im Text besprochene Beispiele für die verschiedenen Methoden genannt.

## 2 Kontinuierliche Messmethoden

### 2.1 Posturographie mit dem Nintendo Balance Board

Die Theorie der Ur-Affekte (Kafka, 1950), aufgegriffen und erweitert von Parrott (2009), verknüpft das emotionale Erleben untrennbar mit Motorik. Gemütsbewegung ist bei Kafka wörtlich zu verstehen. Objekte erzeugen bei uns Erregung und Spannung. Er nimmt Gibsons (1977) Affordance-Konzept vorweg, indem er in Objekten eine Aufforderung an das Individuum sieht, sie auf gewisse Art und Weise zu behandeln.

Die mögliche Handlung, und daraus abgeleitet die möglichen Emotionen, verbindet er mit vier basalen Optionen: Das Objekt näher „heranbringen“ (Ingestion, zum Beispiel bei Gier), das Objekt „hinfortstoßen“ (Ejektion, zum Beispiel Widerwille), vor dem Objekt „fliehen“ (Rezession, etwa bei Furcht) und sich zum Objekt „hinbewegen“ (Profusion, beispielsweise als Liebe). Besonders interessant für die Erforschung des Nutzer-Erlebens sind Objekte, die eine Mischung aus verschiedenen Uraffekten hervorrufen, beispielsweise eine Mischung aus Drohung und Lockung. Dies resultiert in einer Mischung aus An- und Entspannung und dementsprechend in einer komplexen emotionalen Reaktion. Eine Integration dieser Theorie

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in die User-Experience-Forschung würde ein Messinstrument erfordern, das schnell und genau auch subtile motorische Annäherungs- und Vermeidungsbewegungen registriert. Diesen Ansatz verfolgen wir mit dem Einsatz des *Balance Boards* von Nintendo.

### 2.1.1 Technik und Schnittstelle

Das Balance Board des japanischen Videospiele- und Konsolenherstellers Nintendo (siehe Abbildung 3) ist ein Zubehör zur populären Spielekonsole *Wii*. Die Konsole ist seit 2006 auf dem Markt und wurde jüngst durch den Nachfolger *Wii U* abgelöst. Seit 2008 ist für die *Wii* das Zusatzpaket *Wii fit* erhältlich (derzeitiger Marktpreis rund 80 Euro); es besteht aus dem Balance Board und einem dafür entwickelten Videospiele.

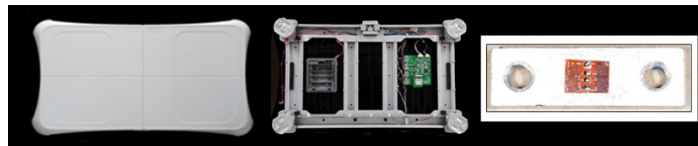


Abbildung 3: Das Nintendo Balance Board von oben (links) und von unten mit geöffnetem Boden (Mitte). In die vier FüÙe sind elektronische Dehnungssensoren integriert (rechts, vergrößerte Darstellung).

In einer eigenen Messreihe mit geeichten Gewichten stellten wir einen linear ansteigenden Messfehler von 100 g pro 15 kg Gewicht (auf dem gesamten Board, also über alle vier Sensoren) fest. Die tatsächliche Abtastrate betrug 100 Hz.

### 2.1.2 Auswertung

Ausgleichsbewegungen während des ruhigen Stehens folgen hoch komplexen Aktivierungen vieler und großer Muskelgruppen (Winter, Patla, Ishac & Gage, 2003). Schwankungen sind so als systematische Grundaktivität in den Daten vorhanden. Um sie weitgehend zu eliminieren, errechnen wir für ereignisbezogene Abschnitte der Daten Fourier-Kurvenanpassungen höherer Ordnung und subtrahieren diese Idealkurven von den tatsächlichen Kurven. Harmonische Schwingungsanteile werden so herausgerechnet. Übrig bleiben schnelle und ereigniskorrelierte motorische Reaktionen des Gleichgewichtsapparates, die unwillkürliche Anziehung und Abstoßung widerspiegeln. Entsprechend Kafkas Theorie würde ein häßliches Bild ein Weg-Bewegen induzieren, also eine Gewichtsverlagerung nach hinten. Durch Betrachtung sowohl der Gewichtsverlagerungskurve als auch ihrer ersten Ableitung können wir sowohl für einzelne Individuen als auch auf Gruppenebene motorische Reaktionen identifizieren, beispielsweise im Vergleich von (zuvor entsprechend bewerteten) als schön und häßlich empfundenen Bildern (Abb. 4). Wir nennen diese Auswertung „Emotional Footprint“.

### 2.1.3 Diskussion

Das Balance Board erlaubt es, mit einfachen Mitteln einen zeitlich hoch aufgelösten und genauen „Emotional Footprint“ zu erstellen. In Kombination mit weiteren Verfahren – beispielsweise einem klassischen Fragebogen vor oder nach dem eigentlichen Board-Experiment – ist es ein wichtiger Baustein der M<sup>5</sup>oX-Toolbox.

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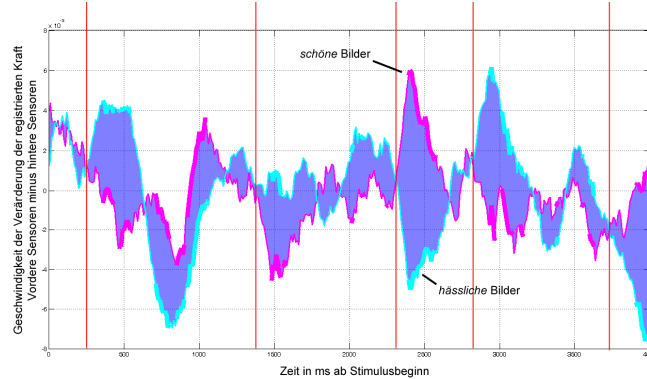


Abbildung 4: Die erste Ableitung der Sensordaten (vordere Sensoren minus hintere Sensoren), gemittelt über 30 Teilnehmer, zeigt charakteristische Unterschiede im Vergleich von schönen und hässlichen Bildstimuli.

## 2.2 Dynamische Erfassung ästhetischer Filmwirkung

Aus Erfahrungen mit optischen Illusionen und Suchbildern kennen wir das Gefühl des "Aha"-Erlebnisses, wenn wir etwas plötzlich deutlich erkennen. Muth und Carbon (2013) deckten diesen „Aesthetic Aha“-Effekt kürzlich anhand unbestimmter Darstellungen von Gesichtern auf. In einer aktuellen Studie untersuchen wir die Relevanz dieses Effekts für die Bewertung künstlerischen Filmmaterials, in dem eine Gestalt entsteht, sich verändert bzw. auflöst und wieder neu entsteht (siehe Beispiele ‚a‘-, ‚d‘ in Abbildung 5). Der Einsatz eines Schiebereglers ermöglicht die Erfassung der Dynamik der Bestimmtheit (respektive Eindeutigkeit) der verschiedenen Phasen des Films sowie der Dynamik des Gefallens. Dies ermöglicht die Betrachtung des Zusammenhangs zwischen Bestimmtheit und Gefallen mit hoher zeitlicher Auflösung.

### 2.2.1 Technik und Schnittstelle

Zur Erfassung kontinuierlicher Daten nutzen wir einen 10 cm langen Schieberegler mit 10 k $\Omega$  (lineare Kennlinie). Der gesamte Schiebeweg wird über 1024 einzelne Messwerte realisiert und über einen FTDI RS232-USB-Emulator an den Rechner übertragen.

### 2.2.2 Experiment und Datengewinnung

In den Räumen der Ausstellung „Irritation und Auflösung“ in der Griesbadgalerie Ulm betrachteten 28 Versuchspersonen vier Stop-Motion Filme (insgesamt 7 min, 15 s.). Sie bewerteten in zwei Blöcken zeitgleich mit der Betrachtung die Filmstadien auf Bestimmtheit respektive Gefallen.

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2.2.3 Auswertung

Abbildung 5 zeigt den Verlauf der dynamischen Bestimmtheits- und Gefallensbewertung über alle fünf Filme. Auffällig ist hierbei die Kongruenz der Variablen zu Beginn des Films und ihr zunehmendes Auseinanderdriften (sichtbar durch die gesteigerte Differenzfläche). In Folgestudien möchten wir eruieren, ob sich v.a. bei unbestimmten Stadien andere Faktoren (z.B. Kontrast) auf Gefallen stärker auswirken und somit die erhöhten Differenzen erklärt werden können (siehe z. B. Standbild ,b' und ,d' in Abbildung 5).

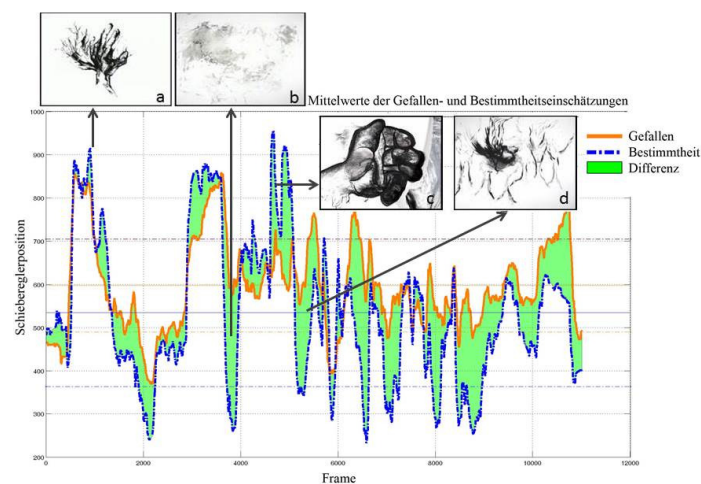


Abbildung 5: Verlauf und Differenz der dynamischen Bestimmtheits- und Gefallensbewertung des Filmmaterials gemittelt über 28 Versuchspersonen. Beispielhafte Standbilder (,a', ,d') veranschaulichen interessante Stadien der Kongruenz und Inkongruenz der ermittelten Variablen.

2.2.4 Diskussion

Die kontinuierliche Erfassung dynamischer Bestimmtheits- und Gefallensbewertungen kann dynamische Prozesse während des Kunstbetrachtens abbilden. Gleichzeitig zeigt sich hier deutlich, dass Multidimensionalität erheblich zum Verständnis komplexer kognitiver und affektiver Prozesse beiträgt und in diesem Fall nötig ist, um das Zusammenspiel von Bestimmtheit und Gefallen während einer ästhetischen Erfahrung zu verstehen.



## 2.3 Kinect zur Erfassung motorischer Konzepte

Bewegungsübungen zur Bewältigung von seelischen Belastungen – beispielsweise Yoga, Qi Gong und Tai Chi – sind weit verbreitet. Unter dem Schlagwort *embodiment* untersucht die Psychologie das Wechselspiel von Emotion, Kognition und Körperbewegungen (Koch & Fuchs, 2001). Einer Vielzahl an Studien zum Einfluss der Körperhaltung auf das psychische Erleben (beispielsweise Carney, Cuddy & Yap, 2010; Riskind & Gotay, 1982) stehen wenige Untersuchungen zu komplexen Bewegungsfolgen gegenüber. Dies könnte zum Teil an der Schwierigkeit liegen, solche Bewegungsmuster von unterschiedlichen Versuchspersonen möglichst ähnlich und damit vergleichbar ausführen zu lassen.

### 3.3.1 Technik und Schnittstelle

Der Microsoft Kinect-Sensor basiert auf Hardware der Firma *PrimeSense*. Ausgestattet<sup>1</sup> ist er mit einem 3D-Mikrofon, einer VGA-Kamera (übliche Videoauflösung 640 x 480 Pixel) und einer IR-Tiefenkamera (57° horizontaler Erfassungswinkel, nutzbare Distanz 0.8 bis 4 Meter<sup>2</sup>). Angesteuert wird Kinect in unseren Experimenten über die Processing 1.5.1, einer auf Java basierenden Grafik-API<sup>3</sup>. Über den Java-Wrapper *SimpleOpenNI*<sup>4</sup> kann das 3D-SDK *OpenNI* angesteuert werden, das alle Kinect-Funktionen nutzbar macht.

### 3.3.2 Experiment und Datengewinnung

In einer ersten Pilotstudie zur Auswirkung von Bewegungsübungen auf den affektiven Zustand ahmten 29 Versuchspersonen eine Qi-Gong-Übung nach. Aus einem zuvor gedrehten Video einer Entspannungsübung extrahierten wir die Position der Hände. Dabei variierten wir einerseits die Länge des Videos sowie die Qualität der gezeigten Bewegung (a) Kreise folgen langsam der kompletten Bewegung, b) Kreise springen ca. pro Sekunde schlagartig zur nächsten Position) Die Versuchspersonen wurden instruiert, mit ihren eigenen Händen diesen Kreisen zu folgen. Dabei wurde die Position der Hände der Versuchsperson kontinuierlich über Kinect erfasst und direkt auf dem angezeigten Video eingeblendet. So hatten die Versuchspersonen eine beständige Rückmeldung, wie gut sie der Bewegung gerade folgen. Vor und nach dieser Übung schätzten die Teilnehmerinnen und Teilnehmer ihren aktuellen emotionalen Zustand. Dazu bewerteten sie 14 Adjektive (wach, ruhig, zentriert,...) auf einer fünfstufigen Skala, die sie über Handbewegungen via Kinect auf der Leinwand „ankreuzten“.

### 2.3.3 Auswertung

Die über Kinect abgegebenen Bewertungen wurden in eine Datenmatrix gespeichert und mit SPSS ausgewertet. Die Versuchspersonen fühlen sich nach der Imitation des kurzen Videos signifikant weniger zentriert als zuvor (Mixed ANOVA, repeated measurement,

<sup>1</sup> <http://msdn.microsoft.com/en-us/library/ff131033.aspx>

<sup>2</sup> [http://msdn.microsoft.com/en-us/library/hh973078.aspx#Depth\\_Ranges](http://msdn.microsoft.com/en-us/library/hh973078.aspx#Depth_Ranges)

<sup>3</sup> <http://www.processing.org/>

<sup>4</sup> <http://code.google.com/p/simple-openni/>

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$F(1,27)=4.99, p=.034$ ); das Imitieren des langen Videos ließ die „Zentriertheit“ dagegen ansteigen ( $F(1,27)=5.98, p=.021$ ). Eine Interaktion ergab sich bei Berücksichtigung der Bewegungsqualität (nur langes Video): Die langsamen, geführten Bewegungen ließen die „Zentriertheit“ ansteigen, das Video mit den Bewegungs-Sprüngen verringerte hingegen die „Zentriertheit“ signifikant ( $F(1,13)=6.086, p=.028$ ). In der Nachbefragung konnten die Versuchspersonen „zentriert“ in Worten schlecht beschreiben. Auch für weitere Adjektive, beispielsweise „wach“, ergaben sich signifikante, hypothesenkonforme Ergebnisse.

#### 2.3.4 Diskussion

Unsere Ergebnisse deuten darauf hin, dass die Bewegungsqualität selbst – und nicht nur das Wissen über den Sinn einer Bewegungsfolge – den affektiven Zustand einer Person verändert. Kinect ermöglichte es, die Bewegung abstrahiert vom Spannungs-Kontext vorzugeben. Gleichzeitig konnten die Teilnehmerinnen und Teilnehmern die Bewegungen ohne vorheriges Üben genau nachvollziehen. Wir vermuten, dass das Rating des Adjektive über Kinect begünstigt hat, dass die Versuchspersonen nach dem Video im motorischen Fluss bleiben und Armbewegungen zum Antworten nutzen konnten – ein großer Vorteil zu einem klassischen Fragebogen. Besonders deutlich zeigten sich die vermuteten Effekte beim Begriff „zentriert“, den die Versuchspersonen verbal kaum definieren konnten. Offenbar ist dieser Begriff stark mit Körpergefühl und Emotionen verknüpft, die verbal schlecht zugänglich sind, mit einer auf Kinect basierenden Testungen aber gezielt manipuliert und auch abgefragt werden können.

### 3 Allgemeine Diskussion

Wir plädieren für ein Konzept des Nutzererlebens, das dynamische Prozesse auf der kognitiven, affektiven und körperlichen Ebene einbezieht. Je nach Fragestellung bieten sich zur Erfassung der relevanten Faktoren und Effekte unterschiedliche Methoden an, deren Qualität sich an der erzielbaren Dimensionalität und Dynamik misst. Mit der Idee der M<sup>5</sup>oX präsentieren wir eine Methoden-Toolbox, die Möglichkeiten und Einschränkungen der einzelnen Techniken systematisch veranschaulicht.

Die beschriebenen Studien exemplifizieren das Potential kostengünstiger, robuster Techniken zur detaillierten Erfassung dynamischer Prozesse. Ziel ist nun die Entwicklung von Standard-Auswertungsroutinen für kontinuierliche Messmethoden sowie eine Fortführung der Toolbox hinsichtlich sinnvoller Kombinationsmöglichkeiten zur Optimierung des Verhältnisses von Dimensionalität und Dynamik.

#### Literaturverzeichnis

Carbon, C. C., Faerber, S. J., Gerger, G., Forster, M., & Leder, H. (in press). Innovation is appreciated when we feel safe: On the situational dependence of the appreciation of innovation. *International Journal of Design*.

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- Carbon, C. C., & Leder, H. (2005). The Repeated Evaluation Technique (RET). A method to capture dynamic effects of innovativeness and attractiveness. *Applied Cognitive Psychology*, 19(5), 587-601.
- Carney, D. R., Cuddy, A. J. C., & Yap, A. Y. (2010). Power posing: Brief nonverbal displays affect neuroendocrine levels and risk tolerance. *Psychological Science*, 21(10), 1363-1368.
- Faerber, S. J., Leder, H., Gerger, G., & Carbon, C. C. (2010). Priming semantic concepts affects the dynamics of aesthetic appreciation. *Acta Psychologica*, 135(2), 191-200.
- Gattol, V., Sääksjärvi, M., & Carbon, C. C. (2011). Extending the Implicit Association Test (IAT): Assessing Consumer Attitudes Based on Multi-Dimensional Implicit Associations. *PLoS ONE*, 6(1). doi: 10.1371/journal.pone.0015849
- Gibson, J.J. (1977). The Theory of Affordances. In R. Shaw & J. Bransford (Eds.). *Perceiving, Acting, and Knowing: Toward an Ecological Psychology*, 67-82.
- Kafka, G. (1950). Über Uraffekte. *Acta Psychologica*, 7, 256-278.
- Muth, C., & Carbon, C. C. (2013). The Aesthetic Aha: On the pleasure of having insights into Gestalt. *Acta Psychologica*, 144(1), 25-30.
- Parrot, W. G. (2009). Ur-emotions and your emotions: Reconceptualizing basic emotions. *Emotions Review*, 2, 14-21.
- Reber, R., Schwarz, N., & Winkielman, P. (2004). Processing Fluency and Aesthetic Pleasure. Is Beauty in the Perceiver's Processing Experience? *Personality and Social Psychology Review*, 8(4), 364-382.
- Riskind, J. H., & Gotay, C. C. (1982). Physical posture: Could it have regulatory or Feedback Effects on Motivation and Emotion? *Motivation and Emotion*, 6(3), 273-297.
- Winter, D.A., Patla, A.E., Ishac, M., & Gage, W.H. (2003). Motor mechanisms of balance during quiet standing. *Journal of Electromyography and Kinesiology*, 13(1), 49-56.
- Zajonc, R. B. (1968). Attitudinal effects of mere-exposure. *Journal of Personality and Social Psychology*, 9(2), 1-27.

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## The Sarrazin effect: the presence of absurd statements in conspiracy theories makes canonical information less plausible

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Reptile prime ministers and flying Nazi saucers—extreme and sometimes off-wall conclusion are typical ingredients of conspiracy theories. While individual differences are a common research topic concerning conspiracy theories, the role of extreme statements in the process of acquiring and passing on conspiratorial stories has not been regarded in an experimental design so far. We identified six morphological components of conspiracy theories empirically. On the basis of these content categories a set of narrative elements for a 9/11 story was compiled. These elements varied systematically in terms of conspiratorial allegation, i.e., they contained official statements concerning the events of 9/11, statements alleging to a conspiracy limited in time and space as well as extreme statements indicating an all-encompassing cover-up. Using the method of narrative construction, 30 people were given a set of cards with these statements and asked to construct the course of events of 9/11 they deem most plausible. When extreme statements were present in the set, the resulting stories were more conspiratorial; the number of official statements included in the narrative dropped significantly, whereas the self-assessment of the story's plausibility did not differ between conditions. This indicates that blatant statements in a pool of information foster the synthesis of conspiracy theories on an individual level. By relating these findings to one of Germany's most successful (and controversial) non-fiction books, we refer to the real-world dangers of this effect.

**Keywords:** conspiracy theories, narrative construction, adaptation, liking, preference, external validity, reframing, assimilation

### INTRODUCTION

A government arms the nation's most prominent skyscrapers with explosives and directs passenger planes right into these buildings: taken at face value, such an evil scenario seems completely off-wall. However, such accusations are a common, probably a typical ingredient of conspiracy theories. While a government trying to conceal acts of failure—for example, the underestimation of a terrorist threat—might be seen in the realm of possibility, the widespread acceptance of very complex malicious plots, such as a government deliberately killing thousands of the own people, is a challenge for psychology. On the one hand, we need to understand why many people adhere to a world view which implies permanent threat to every individual (including themselves). On the other hand, disturbing revelations—such as the recent PRISM<sup>1</sup> leak—make it clear that denying global conspiracies *per se* would be ignorant.

This challenge has multiple theoretical as well as methodological aspects: how and why does the presence of quite extreme information influences the processes of opinion formation? How

can this process be captured and investigated in a valid and yet standardized way? And how can research that addresses these processes take a non-arbitrary stance in the assessment of an individual's conspiracy beliefs, when there is no clear distinction between true and false?

There have been various research efforts on individual differences in the endorsement of conspiracy theories (e.g., Swami et al., 2010). There is a finding that people are willing to adopt obviously contradictory conspiratorial facts at the same time (Wood et al., 2012). Lewandowsky et al. (2013b) indicate that belief in one conspiracy theory is correlated with the belief of other theories. Swami and Coles (2010) provide a comprehensive overview of research on this subject. The proactive and constructive aspect of *creating* a (conspiracy) theory, however, has not been regarded in an experimental design so far.

The analysis of documents like websites and books is appealing, but still has also clear limitations, as we cannot take for granted that these published theories are representative for the stories the majority of people would adopt. Millions of people around the globe create, compile, process, discuss, and reproduce conspiracy theories not only on internet platforms, private websites or blogs, but also in personal communication, which is hard to assess in research. We assume these people to be active

<sup>1</sup>PRISM is an US government codename for an extensive data collection effort, allegedly organized within an intelligence operation based on electronic surveillance procedures. The existence of PRISM was leaked by IT developer Edward Snowden in June, 2013.

information seekers who construct views on important events that match their beliefs and values; and whose beliefs are in turn influenced by information. Extreme theories, in books as well as on the web, would serve as a *mixed bag*, that (speaking with P.T. Barnum) offer “something for everyone”; so everybody is free to adopt some story fragments only. As we have no further information about and control of the regarding creators, proliferators and consumers of such content we need methods—in addition to content analysis (e.g., Lewandowsky et al., 2013a), interviews (e.g., Sapountzis and Condor, 2013) and standardized questionnaires (e.g., Lewandowsky et al., 2013b)—which allow for the dynamic character of compiling, reframing and linking of information to unfold.

Here, we suggest the method of *narrative construction* as a new means to explore the multi-facet phenomenon of conspiracy theories. It allows an individual to construct a *story* for a given event (e.g., the terrorist attacks of 9/11) by selecting and compiling pieces of information related to this event from different content categories. By doing so, we can assess how much conspiracy an individual assumes to be at work concerning the event; without compelling the researcher to define what a “true” story looks like.

This article consists of two main parts. In the first part, we present an exploratory study that helped us to identify core constituents of conspiracy theories in a bottom-up approach. Subsequently, these constituents were used as templates, for pieces of information about 9/11 (retrieved from the World Wide Web). We compiled two sets of information: one set with official and mildly conspiratorial (i.e., with limitations in space and time) information and another set that comprised additional extremely conspiratorial statements. In a laboratory setting test subjects were asked to construct a plausible story of the events of 9/11 using one of these sets of information. This main study showed that the presence of extreme information induced a significant shift of the resulting stories toward a conspiracy theory; importantly, this shift was not paid for by lower plausibility as shown by ratings each test subject gave afterwards for his/her story.

In the second part of this article, we discuss a recent public debate on Sarrazin’s (2010) book *Deutschland schafft sich ab* (*Germany is abolishing itself*) in the light of these findings. The book is among the most successful non-fiction works of the past decade in Germany, (in-) famous for its polemic portrayal of Islamic culture (Sarrazin had been prominent before this debate as senator of finances in Berlin from 2002 to 2009 and as member of the Executive Board of the Deutsche Bundesbank until 2010). Sarrazin’s book was our point of origin: Not only was its impact on political discourse huge; the author presented a patchwork mixture of established facts, assumptions, wild speculations and polemic accusations. We consider his book, at least compatible with conspiracy theories, if not even a conspiracy theory on its own, as we will discuss later on.

If the presence of extreme statements in a pool of given information seduces people to disregard standard information, conspiracy theories can be dangerous indeed: It may shift the tenor of public debate and the individual’s judgments of plausibility toward the extreme.

## MATERIALS AND METHODS

### RATIONALE FOR USING THE METHOD OF NARRATIVE CONSTRUCTION

In spite of the numerous attempts to define what a conspiracy theory is [e.g., Grüter, 2010, even dedicates a full monograph to this question], we found it hard to derive distinct categories of elements from any of such definitions. Many authors refer to the definition of Hofstadter (1965), who claims that a conspiracy theory of a vast, sinister and yet subtle machinery of influence to destroy a way of life. This sums up the main features of common conspiracies, but is too vague to allow for the generation of distinct narrative elements (Bale, 2007). Bale confines himself to political conspiracies aiming at a more differentiated definition. However, he presents discriminative features that mainly define conspiracies by the attributes of the conspiring force. In other words, he discusses a conspiracy’s characteristics, which is not the same as a conspiracy theory’s narrative parts. Additionally, we think that such an attempt would run the danger that primarily the well-known and mostly extreme conspiracy theories—the ones that were used to generate the definitions—become paradigmatic. Research would then focus on such extremes while missing the subtle shadings and nuances of individual theories and everyday phenomena.

In his analysis of Russian folk tales, Propp (1972) has already pointed to the problems of a classification without a guiding principle for defining a story’s features. His solution was a bottom-up categorization of 100 folk stories. He discriminated the tales’ contents and the narrative functions of the elements he found and finally arrived at seven essential story elements (like, the *Hero* or the *Adversary*). Thus, to identify the morphological constants of conspiracy theories, we decided to take a bottom-up empirical stance.

### PREREQUISITE: A BOTTOM-UP ASSEMBLY OF CONSPIRACY THEORY BUILDING BLOCKS

In a preliminary study, we determined which elements are likely to constitute a conspiracy theory. Major aim was to collect maximally diverse kinds of such theories. Five interviewers asked 38 people (students from the University of Bamberg, their friends and relatives) which “intrigues and secret schemes, for example conspiracy theories” they know of. Afterwards, we asked them to reproduce their “favorite conspiracy theory” by their own words. The interviewers also wanted to know where they had heard this story, and why it is their favorite conspiracy theory. As a next step, we asked “which elements are part of most conspiracy theories” as open question, recording the answers verbatim.

The recorded material formed the basis for a bottom-up process of categorization. Each interviewer tried to rephrase the answers from another interviewer’s participants on a more abstract level. The derived categories had then to be defended in an argument with the other interviewers. This kind of argumentative validation, as described by Mayring (2005), went on until all interviewers agreed on a set of six categories for “elements of conspiracy theories,” including category definitions. Due to this inductive process, not all categories are strictly homogeneous; however, a further subdivision of categories could not be justified in the argumentative process based on the given data.

### A.3 The Sarrazin effect

In order to evaluate the importance of these basic items of conspiracy theories, we printed them on cards (one category along with definition and examples on each card) and handed out shuffled sets (each set containing all elements) to 28 participants (undergraduate students of psychology, 23 female,  $M_{age} = 19.7$  years) which had not participated in the initial interviews. The participants were asked to rank these elements by “laying out the cards in the order of subjective importance” and to write down the rank of each item on the respective card when finished. We aggregated these ratings by ordering the items according to the mode of rank orders. The bottom-up generated categories were *odd event*, *evidence*, *non-transparency*, *publicity*, *group of conspirers*, and *myth* (enlisted in **Table 1**).

#### METHOD OF NARRATIVE CONSTRUCTION

Our aim was to allow for the idiosyncratic process of constructing a story under controlled and comparable conditions. We developed the method of *narrative construction* that enables us to observe the process, and to quantify each participant’s output with regard to the hypothesis.

The material for the *narrative construction paradigm* is a compilation of laminated paper cards (each about the size of a playing card, i.e.,  $10 \times 6$  cm). These cards are compiled according to the hypotheses in the following manner (exemplified in **Figure 1**):

- For each independent variable there is a corresponding *suit*, comparable to spades, hearts, diamonds and clubs in a deck of playing cards. For example, if one would be interested to compare internal vs. external attribution in a personal narrative, there would be one suit of cards with statements compatible with internal control beliefs, and one suit with cards all assuming external control. For our case, we compiled one suit containing *official*, one containing *limited conspiratorial*, and

one containing *unlimited conspiratorial* items (representing a three-stepped approach).

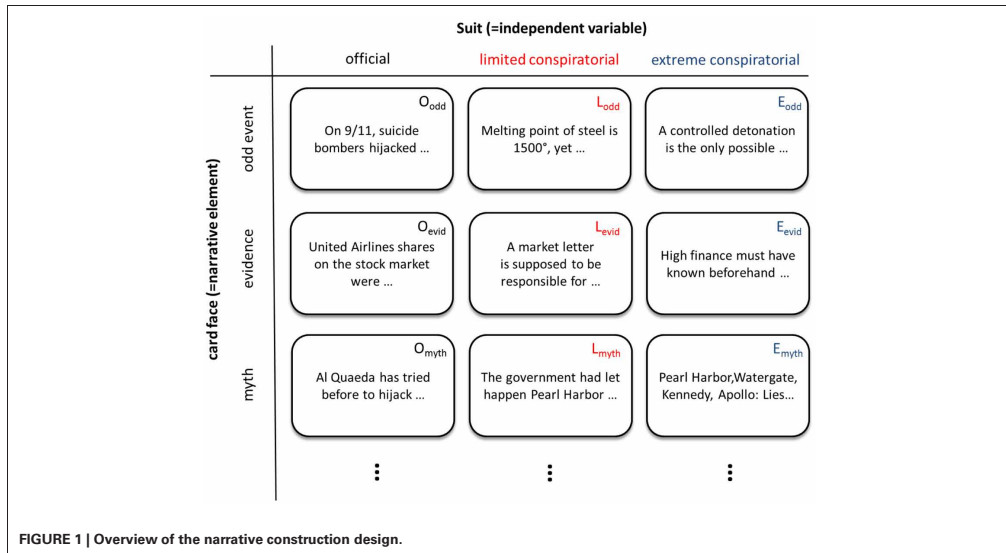
- Within the suits, there are cards for the categories, i.e., the elements deemed important for the narrative. Each suit contains corresponding cards, like there’s an ace of spades, an ace of hearts, etc. For exploring a narrative of control beliefs, there might be one card for work (in the card came metaphor, a king), one for family (say, a queen), one for sports (a joker), etc. (in contrast to playing cards, there is no rank order obvious to the participant). In our case, with six conspiracy theory elements/categories, there should be at least six cards within each suit—one per category, corresponding between suits.
- To allow for more complex narratives, it is possible to compile more than one card per category. For example, one might include three items concerning private life. This is not a feature of playing cards, but can be thought of, e.g., several Queens, all slightly different in their appearance. In conspiracy research, for example more than one card concerning the odd event might be useful

Each participant is handed out the set of shuffled cards at once. They are asked to “construct a story that is—in his personal view—a plausible explanation” for cause for a certain event or process (for example, work-life balance; or, as in our case, 9/11). In the beginning, the participant is instructed to read each card and to coarsely categorize the items into two groups, a “plausible” one and a “not plausible” one. Each of these categorizations could be revised in the course of the process. After the initial pre-sorting, the participant is asked “to serialize the cards to produce a stringent and plausible course of events using as few or as many cards” as he wants. Again, removing or adding cards to the “not plausible”-heap is still, and explicitly, allowed. Furthermore, no time restriction is applied.

**Table 1 | Items generated by a bottom-up process of categorization, ordered descending by importance.**

Category label	Category definition	Standard examples
Odd event	There is a relevant event that gains interest of many people. There are some open questions concerning this event	<ul style="list-style-type: none"> <li>• “Apollo-mission”</li> <li>• “9/11”</li> <li>• “Kennedy assassination”</li> </ul>
Evidence	There is evidence, observations, artefacts, and other indications, that are used by conspiracy theorists to support their theories. There are secret signs and symbols supporting the conspiracy theorists’ view	<ul style="list-style-type: none"> <li>• “Symbols seen everywhere”</li> <li>• “Undeniable facts”</li> </ul>
Non-transparency	The situation about available information concerning a topic is non-transparent. Media coverage is obscure. There is cover-up and manipulation of information	<ul style="list-style-type: none"> <li>• “Cover-up of reality”</li> <li>• “Not enough inside-information available”</li> </ul>
Publicity	There is an official viewpoint for a topic. Public agents (e.g., government, experts, scientists, intelligence agencies) acknowledge this viewpoint. However, this account is regarded by some with scepticism and distrust. The official viewpoint contradicts the non-official viewpoint by conspiracy theorists	<ul style="list-style-type: none"> <li>• “The media spread information”</li> <li>• “Experts that testify”</li> </ul>
Group of conspirers	There is a group of conspirers. These conspirers are evil and influential, and strive to gain more and more money and power. They forge a secret plot at the expense of other groups or individuals	<ul style="list-style-type: none"> <li>• “Persons that work in secrecy”</li> <li>• “A chosen or intricate minority”</li> </ul>
Myth	Historic myths exert a strong influence on conspiracy theories. There are esoteric elements as part of conspiracy theories	<ul style="list-style-type: none"> <li>• “Esotericism”</li> <li>• “A fight between good and evil”</li> </ul>

### A.3 The Sarrazin effect



By assigning participants to groups and varying the cards between these groups, different research questions can be addressed. To test the influence of the presence of a specific independent variable (= suit), the presence of this suit can be varied. To fathom whether the presence of a specific category influences the selection behavior concerning the other categories, only one group of participants receives cards of this category (for example, Queens present vs. no Queens present).

After the participant has indicated that he/ she is satisfied with his/ her story, he/ she is further asked to rate “how plausible the laid-out story is” with regard to the event in question, on a five-point Likert scale (1 = not plausible, 5 = plausible). Finally, the generated narrative is recorded (by writing down each card’s code, printed on the backside that indicates category and factor level in the laid-out order). This procedure is conceptually similar to Meichenbaum’s (1996) constructive-narrative therapy which emphasizes the importance to re-construct one’s life story when suffering from post-traumatic stress disorder. Wilson (2002) regards introspection as a personal narrative “whereby people construct stories about their lives, much as a biographer would” (p.162). This kind of introspection is seen as beneficial for one’s mental well-being by Wilson. He also notes that the process is vulnerable to omissions and simplifications—which are, in our context, not interfering variables, but in fact the effect of interest. McAdams (1997) even argues that we *are* in fact the stories we create.

We devised the narrative construction to be a third way, besides questionnaires and interviews. Already with three dozen cards (for example, three suits à 12 cards), there are billions of possible stories, i.e., combinations. Compared to a questionnaire, this allows for more diversified, idiosyncratic results. Reading,

evaluating, sorting and laying out multiple cards can be considered to be more demanding cognitively than serially answering a number of questionnaire items, and it would allow to assess the process of opinion formation, too; for example, by asking participants to *think aloud* while constructing the story. This comes at a price: psychometric criteria can’t be applied straightforward here.

Compared to an interview, narrative construction is tighter. The number of items is limited. A transcription and categorization after the experiment is not necessary, as the cards are coded and the chosen items can easily be written down. However, in contrast to an interview, a spontaneous introduction of new items is not possible. The participant’s attention stays focused on the process of story creation in narrative construction, while an interview introduces a social facet. It depends on the research question if introducing social interaction is instrumental or a confounder.

A simple evaluation of a narrative construction’s result would be to count the number of items chosen from each suit (for example, internal vs. external attribution, when there were two according suits); and/or to count the number of card faces chosen (e.g., how many participants have included “sports” in their work-life-balance narration). This evaluation would be straightforward and could tell which attributional style is predominant in the sample, and/or which aspects are most relevant for people when it comes to balancing their life. By varying specific aspects, the influence some information exerts onto other information can be assessed. For instance, by giving some participants an additional *suit*, the impact of the availability of this information can be measured. Another way is handing out some additional *cards*. Sticking to the control belief example, we could assess how stories change when people are offered cards allowing for counseling or therapeutic advice.

More sophisticated assessments could aim at the structure of stories, e.g., look for typical sequences. Also, one could test if certain aspects nearly always appear together, or turn out to be mutually exclusive.

In sum, whenever a questionnaire seems too rigid, when a thorough and attentive process is desirable, and when narrative structures might be relevant, narrative construction might be an option. However, when a dyadic social interaction is preferable, when hypotheses are too vague, and when the topics in focus are too broad to be represented adequately with a deck of cards, an interview should be preferred. Yet, there are research questions where a combination of narrative construction and interview is appealing. By interacting with a deck of topic-related cards, participants might get a grip on a topic, by evaluating all aspects the researcher likes to consider. This sort of elaborate priming might help to facilitate a subsequent interview.

#### CONSTRUCTING A 9/11 STORY

##### Material

For our research question, we compiled 14 cards for each suit (see Table 1). With respect to the bottom-up derived elements of conspiracy theories: two for *group of conspirers*, one for *non-transparency*, one for *publicity*, three for *odd event*, three for *evidence* and one for *myth*. Each item was present in each suit (i.e., 3 cards), fueled with contents from typical (1) *official*, (2) *limited conspiratorial*, and (3) *unlimited conspiratorial* viewpoints. The *official* suit card always bore a category-related statement that was in accordance with official 9/11 reports and documents (drawing on respectable sources, e.g., governmental reports made public on the internet). For example, an *official group of conspirers*-item was: “9/11 mastermind were Islamist terrorists, led by Osama bin Laden, to attack the detested Western culture.”

The card in the *limited conspiratorial* suit was prepared with an item that contained an explanation describing a conspiracy of moderate strength. Specifically, this level was formed in accordance with Lutter’s (2001) categorization of conspiracies, corresponding to a conspiracy limited in time and space. This can also be thought as matching Daniele Ganser’s (n.d.) 9/11-view “let it happen on purpose” (LIHOP). In this view, the Bush administration did not initiate the attacks, but knew beforehand and did not take countermeasures. We compiled information from web resources like Wikipedia that matched this level. The “group of conspirers”-item here read: “The US administration had let happen the 9/11 attack to justify the wars in Afghanistan and Iraq.”

In the *unlimited conspiratorial* suit, a card assumed a conspiracy with no clear bounds within space and time, or a “make it happen on purpose” (MIHOP) viewpoint in the sense of Ganser (n.d.). For example, it read: “The US administration had planned and conducted the 9/11 attack to justify the wars in Afghanistan and Iraq.”

So for each of the six categories (odd event, evidence, non-transparency, publicity, group of conspirers and myth), there was at least one triplet of cards (one card with an official statement, one limited conspiratorial and one unlimited conspiratorial); details in Figure 1.

An exempt was a further category, *absurdity*, where all items were completely off-wall: One assumed “thermonuclear devices

hidden in the Twin Towers,” one “killer satellites from outer space,” and one stated that “the Syrian newspaper Al Thawra has reported that 4000 Jewish WTC employees were warned beforehand and did not show up on work on 9/11.” These items were identical for both experimental groups, included for another research question and are not considered any further for the hypothesis discussed here.

##### Participants

Thirty persons (26 female,  $M_{\text{age}} = 22.4$  years, range: 19–55 years) took part in the study. They were recruited at and around the campus of the University of Bamberg; they were naïve to the aim of the study and had not been involved in any other study described in this paper. The participants were randomly assigned to two groups: (1) *modest contents group* and (2) *extreme contents group*.

##### Procedure

The *modest contents group* was handed out a card deck with 29 items, containing the *official* as well as the *limited conspiratorial* suit (plus the three-card subset absurd). The *extreme contents group* received the same deck and additionally the suit with 13 *unlimited conspiratorial* items. All were asked to “construct a plausible story of the events of September 11th 2001, as a single coherent story or consisting of coherent or controversial fragments,” without time restrictions. When the participant had considered the story finished, the chosen items and their layout were written down. The participant was then asked to rate “how plausible the 9/11 story version just laid out is” on a five-point Likert scale (among other questions related to other hypotheses). Overall, the participants spend 21 min on average to construct their story, with a range from 8 to well over 30 min.

#### RESULTS

The groups did not differ significantly in terms of age [ $M_{\text{modestgroup}} = 21.3$ ,  $M_{\text{extremegroup}} = 24.8$ ,  $F_{(1, 28)} = 2.17$ ,  $p = 0.15$ , *n.s.*]. Each group consisted of 13 female and two male participants.

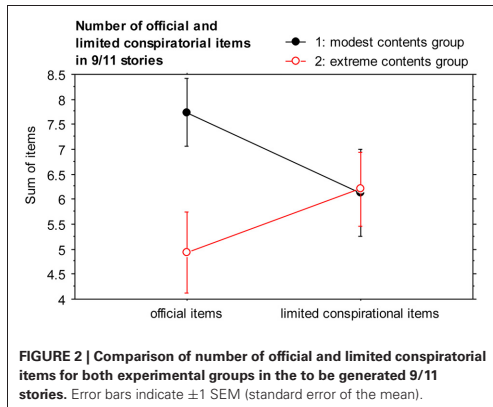
To compare the stories between groups, we summed up the number of cards chosen from each conspiratorial level (official, limited and unlimited) over all categories. So for each participant, we added up all official items, all limited conspiratorial items and all unlimited conspiratorial items (the latter being trivially zero for the group of participants who had not received any of these cards).

In the modest conspiratorial condition, participants on average selected 7.7 out of 13 official items ( $SD = 2.6$ ) and 6.8 out of 13 limited conspiratorial items ( $SD = 3.3$ ) to construct a 9/11 story (Figure 2). On average, 12.8 items were used, with a range from 6 to 23 items. When the full set was available, there were 4.9 out of 13 official items selected on average ( $SD = 3.2$ ), 6.2 limited conspiratorial items ( $SD = 2.4$ ) and 3.9 unlimited conspiratorial items ( $SD = 3.7$ ). 15.8 items were used on average, with a range from 6 to 30 items.

With a One-Way Analysis of Variance (ANOVA), we tested if number of items selected from the official as well as from the limited conspiratorial item pool (these numbers being the dependent variables) differed between the two groups. The difference in the



### A.3 The Sarrazin effect



number of official items selected was significant,  $F_{(1, 28)} = 6.92$ ,  $p = 0.0137$ ,  $\eta_p^2 = 0.198$ , with  $M = 7.7$  ( $SD = 2.6$ ) for the official and  $M = 4.9$  ( $SD = 3.2$ ) for the limited conspiratorial item pool, whereas we found no difference in the number of selected limited conspiratorial items,  $F_{(1, 28)} < 1$ ,  $p = 0.95$ , *n.s.*

Importantly, the different composition of items for the single stories did not lead to different plausibility levels, thus potential acceptance of the regarding stories. When analyzing the plausibility ratings of the stories, we could not reveal any difference between the *extreme contents group* ( $M = 4.0$ ,  $SD = 0.5$ ) and the *modest contents group* ( $M = 3.8$ ,  $SD = 0.9$ ),  $F_{(1, 28)} < 1$ ,  $p = 0.45$ , *n.s.*

## DISCUSSION

### THEORETICAL DISCUSSION

People had to generate their own stories for one of the most dramatic events of contemporary history. The available building blocks were limited to a number of statements taken from the real world, i.e., reflecting the official version of 9/11 as well as mild and extreme conspiratorial views. The stimuli were selected to match a set of categories that was identified to be typical for conspiracy theories.

The small number of categories and the three-level design confined the stories' content. Yet, mathematically the participants had the opportunity to build one out of over eight billion possible stories (already when the structure, i.e., the item order of the laid story, is not regarded). Furthermore, there was no time restriction.

Our results indicate that people construct a plausible explanation for an important event by integrating all pieces of information available, even if this information implies a huge conspiracy.

While one would expect a going to extremes in a discussion of several persons, the significant drop in the number of canonical items shows that a shift of the bounds of plausibility already begins in an individual's mind. Notably, there was no time pressure, and the time people used can be considered well above the duration of usual media coverage. Consequently, we would

not consider this effect as a heuristics in the sense of a cognitive shortcut. Indeed, the effect appeared as a result of a thorough consideration of information. The result was not a single-best answer, but a coherent story.

We asked German people to construct a 9/11 narrative; we might expect the stories' content to be influenced by the participants' home country and, going hand in hand, the individual concern with the 9/11 aftermath. However, we wanted to induce active story construction, and for our German sample we could be sure every participant knew of this event; and at the same time we could be fairly sure there was no personal involvement—in a sense that a participant might have known one of the 9/11 victims personally.

As items were taken from real-world sources, they were not matched in terms of representativeness for a given category or factor level. Thus, there will very likely have been differences in *conspiratorialness* within the groups. Additionally, there were different levels of mutual exclusion: some extremely conspiratorial items were not compatible with their official counterpart (and vice versa); for example, a controlled detonation ruled out the planes as ultimate cause for the collapse of the towers. Other items, however, were mutually consistent; for example, a government lying about Pearl Harbor can be in accordance with an Al-Qaeda attack. Further research has to show if a matching of items is possible; and if it is desirable, as heterogeneous and in part mutually exclusive information is characteristic of real-world opinion formation.

Another promising research question would be the stability of generated narratives. For example, if participants are asked to construct a story again 1 or 2 days later: will they produce the same plot?

The shift from a moderate toward an extreme conspiracy did not come with a decline of self-perceived story plausibility. What we did not test, however, was to which extent the participants identified with their story. Would they cling to it when they were confronted with the necessity to act; for example, when they would be asked to defend their narrative against critical questions?

One could object that participants were limited by the story fragments available, particularly in the non-extreme condition, and thus not able to produce the "perfect" conspiracy they would have looked for. If so, however, we would have expected a lower plausibility rating on average for this group; or, alternatively, a drop in mildly conspiratorial items when the full set was presented, with the number of canonical items not affected.

While the method and the results presented here could undoubtedly be optimized, they indicate that extreme positions in an alleged conspiracy foster the active acquisition of that conspiracy. This indicates a danger we will discuss in the light of one of the most heated public debates in Germany of recent years.

### GERMANY IS ABOLISHING ITSELF: THE PRACTICAL DANGERS OF ABSURD STATEMENTS

Sarrazin's (2010) book *Deutschland schafft sich ab* (*Germany is abolishing itself*) was a "blockbuster"—in a double sense. On the one hand, it was a huge success in terms of publicity, spearheading Germany's non-fiction bestseller list for 21 consecutive

weeks (Buchreport.de, n.d.), making it the most successful book about politics from a German author of the decade (Media Control, 2010). On the other hand, it has mined public debate about the integration of people with migration background until today.

In his book Sarrazin devises a scenario which displays all of our criteria for a conspiracy theory: While Germany's population is diminishing, Muslim minorities keep growing due to constantly high birth rates (*odd event*). Thus, Sarrazin predicts that the "real" Germans—cultural pureness can be seen as the esoteric *myth*-element here—will soon be outnumbered by the offspring of immigrants from Muslim countries. Highly fertile, yet unwilling to adopt our value system, these people (*group of conspirers*) are secretly (*non-transparency*) taking over the German society, gradually reorganizing it in accordance with their religious beliefs. Sarrazin's line of argument mixes facts, opinions and anecdotes from very different areas and levels of life and knowledge (*evidence*). Most controversial were his crude assumptions of an "IQ score being 15 points higher" (Sarrazin, 2010, p.93) among Jews of European origin; as well as his claim that we "become more stupid on average for mere reasons of demography" (p.100), as Muslim immigrants, in Sarrazin's argumentation, would lower society's general intelligence level. Last but not least, Sarrazin claims that the truth about all this is being suppressed by excessive political correctness in public debate and that this self-imposed censorship is a result of collective feelings of guilt dating back to the "Third Reich" (*publicity*).

Many protagonists in the debate refuted the extreme statements about a linkage between religion, fertility and religiously determined intellectual brilliance. Yet, they admitted that Sarrazin had made some important points about migration in general (as critically discussed, for example, by Lau (2009), when Sarrazin's views had become public for the first time). Notably, the book review rated *helpful* by most other users at the British online bookstore amazon.co.uk, reads as follows: "... yes there are elements that most people will find hard to agree with no matter how persuasively argued but that shouldn't detract from the vast majority of what is being argued in the book" (Thinkforachange, 2010).

Our question here is not if these radical aspects of Sarrazin's book had been a means of promotional success, which seems beyond doubt: he got prime-time attention for months. The validity (and non-validity) of his assumptions has been discussed extensively, for example in Foroutan (2010). Also, the social dimension—has there been a taboo that Sarrazin has dared to break, or has this alleged taboo just been an excuse for some to spread xenophobic attitudes—is not in focus here.

On basis of the findings of our empirical study, we have good reason to believe that the presence of rather extreme statements shifts peoples' cognitive bounds when they construct their opinion about complex political events: they will tend to construct a more radical view when such information is offered. In this case: even if people won't adopt the view of Jewish intelligence DNA, the presence of this statement—say, while reading the book or while listening to a debate on TV—might result in a more extreme personal narrative. Adaptation research points us in the direction of the possible reason for this: As soon as we perceive and

process extreme items, we integrate them into our mental representation (e.g., Strobach and Carbon, 2013) yielding adaptations toward the new items (e.g., Carbon, 2011), thus the whole narrative gets more extreme. What has been shown by these authors to work in the visual domain, seems to hold for verbal, semantic information, too.

So a conspiracy theory (in the sense outlined here) bears many dangers: the complex and anecdotic reasoning immunizes against falsification. Extreme constituents attract attention and polarize the debate; and they also might induce a shift of people's individual explanatory constructs toward a conspiratorial plot. In sum, a flavor of oddness might not be a weakness of such theories, but indeed an integral part and enabler of their persuasive power.

#### CONSPIRACIES AND REPTILE POLITICAL LEADERS

Extreme and sometimes absurd statements seem to be an ingredient of many conspiracy theories. But what role do reptile aliens and flying Nazi saucers play in conspiracy theories? Are such statements merely included for dramatic effect in order to attract our attention, or do they really affect what we *believe* in the end?

We have shown that the presence of rather extreme statements does have an effect on people's story construction. The "official" view becomes of lesser importance. Moderate items are disregarded, and in turn extreme statements are integrated. With a case study of Sarrazin's book *Deutschland schafft sich ab* (*Germany is abolishing itself*) we illustrated the danger of a theory containing established facts, speculations and rather crude opinions.

We focused on the constructive nature of forming an opinion. Such an opinion was seen as a *story*—a system of coherent information—answering key questions related to a given event or process: Why did it happen? Who is responsible? Who is affected?

We deem this view crucial for research on conspiracy theories. One does not simply perceive such a theory to accept or refute it. One will rather match this theory with one's own *eventuality space*, that is, all things one deems possible. In the end, the eventuality space might be *recalibrated* to incorporate new facts just as recent findings on the adaptivity of memory representations have shown (e.g., Carbon, 2011; Carbon and Ditye, 2011). In turn, the person might come up with a new (conspiracy) theory that shares some, but not necessarily all elements of the original theory. As Leman and Cinnirella (2007) has already noted, biases and heuristics play an important role. While he focused on the cause-effect-relationship, we considered the scope of information as an influencing factor on the frame of plausibility.

It is these dynamics of reception, alteration and propagation that account for the many-faceted phenomenon we call conspiracy theory. The cognitive effort, i.e., considering information in the eventuality space, might be rewarding and satisfying in itself; just like an aesthetic experience or a mental exercise (cf. Muth and Carbon, 2013). Unlike a crossword puzzle, however, reception and propagation of a conspiracy theory allow for intercommunication. Yet, as many participants reported afterwards, constructing a story can ultimately be *fun*.

These results might also explain why some conspiracy theories are believed—one might think of reptile aliens governing important nations in disguise of familiar political leaders—, although they seem stark mad to outsiders. Given the mechanism found

here holds for an ongoing, long-term cycle of information seeking and opinion formation, it might be possible that a small but constant shift toward an extreme will not arouse the truth-seeker's suspicion.

As a next step, we will take a closer look at the process of story construction, e.g., by letting participants *think aloud*. Right now, we do not know what motifs guide the individual's constructive process. With a larger sample, we will also compare

the structure of the generated narratives to identify whether there are certain aspects, respectively content categories that are more likely to be influenced by the presence of extreme opinions. Taking a closer look at individual differences (Are there predictors for people who will fall for this effect? Are there people who might even be deterred by extremist testimonies, thus responding with a shift in the opposite direction?) is on the agenda, too.

## REFERENCES

- Bale, J. M. (2007). Political paranoia v. political realism: on distinguishing between bogus conspiracy theories and genuine conspiratorial politics. *Patterns Prejudice* 41, 45–60. doi: 10.1080/00313220601118751
- Buchreport.de. (n.d.). *Sales ranking for the book "Deutschland schafft sich ab" by Thilo Sarrazin*. Retrieved 31 March, 2013 from: [http://www.buchreport.de/bestseller/bestseller\\_einzelsicht.htm?tx\\_bestseller\\_pi1\[isbn\]=9783421044303](http://www.buchreport.de/bestseller/bestseller_einzelsicht.htm?tx_bestseller_pi1[isbn]=9783421044303)
- Carbon, C. C. (2011). Cognitive mechanisms for explaining dynamics of aesthetic appreciation. *i-Perception* 2, 708–719. doi: 10.1068/i0463aap
- Carbon, C. C., and Ditye, T. (2011). Sustained effects of adaptation on the perception of familiar faces. *J. Exp. Psychol. Hum. Percept. Perform.* 37, 615–625. doi: 10.1037/A0019949
- Foroutan, N. (2010). *Sarrazins Thesen auf dem Prüfstand. Ein empirischer Gegenentwurf zu Thilo Sarrazins Thesen zu Muslimen in Deutschland [Sarrazin's theses to be on trial. An empirical counterdraft against Sarrazin's theses on muslims in Germany]*. Retrieved 5 March, 2013 from: <http://www.heyemat.hu-berlin.de/dossier-sarrazin-2010>
- Ganser, D. (n.d.). 911 untersuchen [Investigating 9/11]. Retrieved 1 March, 2013 from: <http://911untersuchen.ch/wissenschaft/daniele-ganser/>
- Grüter, T. (2010). *Freimaurer, Illuminaten und andere Verschwörer: Wie Verschwörungstheorien funktionieren [Freemasons, illuminates and other conspirators: How conspiracy theories work]*. Frankfurt am Main: Fischer.
- Hofstadter, R. (1965). *The Paranoid Style in American Politics and Other Essays*. Cambridge, MA: Harvard University Press.
- Lau, J. (2009). Available online at: <http://www.zeit.de/2009/44/Political-Correctness>; <http://blog.zeit.de/foerglaul/>
- Leman, P. J., and Cinnirella, M. (2007). A major event has a major cause: Evidence for the role of heuristics in reasoning about conspiracy theories. *Soc. Psychol. Rev.* 9, 18–28.
- Lewandowsky, S., Cook, J., Oberauer, K., and Hubble-Marriott, M. (2013a). Recursive fury: conspiracist ideation in the blogosphere in response to research on conspiracist ideation. *Front. Psychol.* 4:73. doi: 10.3389/fpsyg.2013.00073
- Lewandowsky, S., Oberauer, K., and Gignac, G. E. (2013b). NASA faked the moon landing—therefore, (climate) science is a hoax: an anatomy of the motivated rejection of science. *Psychol. Sci.* 24, 622–633. doi: 10.1177/0956797612457686
- Lutter, M. (2001). *Sie kontrollieren alles! Verschwörungstheorien als Phänomen der Postmoderne und ihre Verbreitung über das Internet [They control everything! Conspiracy theories as phenomenon of the post modern time and their dissemination to the internet]*. Munich: Edition Fatal.
- Mayring, P. (2005). *Neuere Entwicklungen in der qualitativen Forschung und der Qualitativen Inhaltsanalyse [New developments for qualitative research and the qualitative content analysis]*. Weinheim: Beltz.
- McAdams, D. P. (1997). *The Stories We Live by: Personal Myths and the Making of the Self*. New York, NY: Guilford.
- Media Control. (2010). Thilo Sarrazin sprengt alle Rekorde [Thilo Sarrazin breaks all records] Retrieved 6 March, 2013, from <http://www.media-control.de/thilo-sarrazin-sprengt-alle-rekorde.html>
- Meichenbaum, D. (1996). Posttraumatisches Stresssyndrom und narrativ-konstruktive Therapie [The post-traumatic stress syndrome and the narrative-constructive therapy]. *Systema* 10, 6–19.
- Muth, C., and Carbon, C. C. (2013). The Aesthetic Aha: on the pleasure of having insights into Gestalt. *Acta Psychol.* 144, 25–30. doi: 10.1016/j.actpsy.2013.05.001
- Propp, V. (1972). *Morphologie des Märchens [Morphology of the folk tale]*. München: Hanser.
- Sapountzis, A., and Condor, S. (2013). Conspiracy accounts as intergroup theories: challenging dominant understandings of social power and political legitimacy. *Polit. Psychol.* doi: 10.1111/pops.12015. Available online at: [http://academia.edu/3418827/Conspiracy\\_theories\\_and\\_intergroup\\_representation](http://academia.edu/3418827/Conspiracy_theories_and_intergroup_representation)
- Sarrazin, T. (2010). *Deutschland schafft sich ab. Wie wir unser Land aufs Spiel setzen [Germany is abolishing itself. How we put our nation at stake]*. Munich: Deutsche Verlags-Anstalt.
- Strobach, T., and Carbon, C. C. (2013). Face adaptation effects: reviewing the impact of adapting information, time, and transfer. *Front. Percept. Sci.* 4:318. doi: 10.3389/fpsyg.2013.00318
- Swami, V., Chamorro-Premuzic, T., and Furnham, A. (2010). Unanswered questions: a preliminary investigation of personality and individual difference predictors of 9/11 conspiracist beliefs. *Appl. Cogn. Psychol.* 24, 749–761. doi: 10.1002/acp.1583
- Swami, V., and Coles, R. (2010). The truth is out there. *Psychologist* 23, 560–563.
- Thinkforachange. (2010). Interesting critique on trajectory of the German state [Customer review on amazon.co.uk] Retrieved 9 September, 2010, from [http://www.amazon.co.uk/review/R2XX532VODFK6/ref=cm\\_cr\\_dp\\_title?ie=UTF8&ASIN=3421045453&channel-detail-glance&nodeID=266239&store=books](http://www.amazon.co.uk/review/R2XX532VODFK6/ref=cm_cr_dp_title?ie=UTF8&ASIN=3421045453&channel-detail-glance&nodeID=266239&store=books)
- Wilson, T. D. (2002). *Strangers to Ourselves: Discovering the Adaptive Unconscious*. Cambridge, MA: Harvard University Press.
- Wood, M. J., Douglas, K. M., and Sutton, R. M. (2012). Dead and alive: beliefs in contradictory conspiracy theories. *Soc. Psychol. Pers. Sci.* 3, 767–773. doi: 10.1177/1948550611434786

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## Conspiracy belief and personal beliefs

Exploring the linkage between a person's value system and the tendency for conspiracy beliefs

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### Abstract

To believe that *Big Pharma*, *Big Data*, the government or a secret society is deliberately endangering your health touches your most fundamental views on society: Who is in power, and who should be? What about personal freedom and the pursuit to happiness? Does the profit of a few outweigh the well-being of the masses? In other words, conspiracy theories affect very important, even fundamental beliefs and values, sometimes in an abstracted sense—and portray them as being endangered. Building on the example of the *Stuttgart 21* protests – mass demonstrations on a railway and urban development project in Stuttgart/Germany that dominated Germany's news coverage in 2010 – we hypothesize that a conspiratorial plot is a narrative schema that puts one's most important beliefs at stake in general following a distinct narrative pattern. From this point of view, actual conspirers are exchangeable, thus typical stereotypical conspirers cannot be identified—however, we can recognize characteristic topics conspiracies seemingly want to attack, i.e. basic values such as freedom of speech, “democracy”, personal well-being, distribution of wealth and healthcare, and self-actualization. Main idea behind this approach is to develop a meta theory of conspiracy stories, defocusing from pathological personality traits of conspirers. Such an approach could also explain why a singular event like 9/11 is the cardinal point for far-left as well as extreme-right conspiracy theories: not the event, not even the masterminds, but the values endangered by the supposed agenda behind the event make the difference. In a pilot study, we employed the method of narrative construction where 35 participants were asked to construct the course of events concerning the (fictitious) establishment of a new study course *Future Concepts of Humanity* at a renowned German university. Manipulations relating to the study course were attributed to different stakeholders (a left-wing Student's Union, a famous consulting agency, societal activists, and a Christian leader). We found that holding *conservative* values was positively correlated with choosing story fragments implicating a societal conspiracy of the LGBT community. Valuing *self-transcendence* (i.e., being benevolent and favoring higher, general ideas), in contrast, was negatively correlated with constructing a LGBT conspiracy. A value system favoring *openness for change* was negatively correlated with conspiracy attributions in general. So, people valuing conservative beliefs tended to construct a conspiracy theory that portrayed a very progressive group as mean-spirited, while people valuing benevolence and universal principles for all humankind did the opposite. These results indicate that a person's value system might be a predictor for engagement with conspiracy theories; even a specific predictor for the content of an individual's conspiracy theory.

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### Introduction – A Case Study

What do people stand up for? Usually, for what is dear and important to them. When something that is beloved gets endangered, a person's thoughts and actions will focus on defending those things or ideas under attack. Consequently, we might learn much about an individual when we know what ideas he or she is willing to advocate. As soon as we learn more about those "desirable transsituational goals [...] that serve as guiding principles in the life of a person or other social entity" (Schwartz, 1994, p.21) – in other words, about the values – of a person, we gain a deeper understanding. Our aim is to take a closer look at the *guiding principles* that are at stake in conspiracy theories (CTs); in other words, to shift the focus from the villains appearing in CTs to the villains' targets.

There has been some research on individual differences concerning the belief in conspiracy theories (for an overview, see e.g. Swami & Coles, 2010). Yet, common to these approaches is an emphasis on the conspirers appearing in CTs. Wood, Douglas and Sutton (2012) found that believing Osama bin Laden to be dead and believing him to be alive need not be mutually exclusive. They conclude that "central beliefs, such as the conviction that authorities and officials engage in massive deception of the public to achieve their malevolent goals" (Wood, Douglas & Sutton, 2012, p.6) might be behind this kind of thinking the authors call *monological*. We would like to go one step further and investigate if the monological thinking is, at least to some extent, better understood as a reflection of a person's constitutive and monolithic most important personal value.

To illustrate this, we introduce a recent case of a sociopolitical mass movement in Germany. The movement had dominated media coverage for months, had mobilized tens of thousands of people, and might be considered as protest movement against a perceived conspiracy: a mass protest against *Stuttgart 21*, that is, against the enterprise to re-build the train station in Stuttgart (Baden-Württemberg, Germany), underground. A huge area, so far occupied by rail tracks, would become free and could be used for urban development. Overall cost for this project has reached over six billion Euros. Critics accused the federal government of wasting taxpayers' money and insinuated there had been secret deals between politicians and corporations for personal gain. There had been demonstrations with over 60.000 (official estimate) resp. 150.000 people (organizer's estimate), and encounters between police and protesters leaving over 100 people severely wounded (e.g., Südwestrundfunk, 2014; Stuttgarter Zeitung, 2013). Socio-demographic studies (Bebnowski et. al, 2010) showed that protesters' education was about average, with over 40 percent holding a university degree; and that over 90 percent reported a very strong identification with democratic values like freedom of speech, of assembly, and of press. Over 70 percent reported a political view left of the political median (1-4 on a 1-10 scale from *extreme left* to *extreme right*). Up to now, there are investigations against Baden-Württemberg's former prime minister about his role in the protest's escalation leaving people severely wounded, and about supposed financial inconsistencies (Zeit Online, 2014).

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Tens of thousands of highly educated people, mainly left-wing, holding democratic values high – are protesting against the reconstruction of a train station. This rather unusual constellation might help us to shed some light on the relation between personal values and conspiratorial beliefs.

### Defining *Conspiracy Theory*

“Conspiracy theories can be defined in a variety of ways, and it appears each scholar refers to their own definition.” (Jolley, 2013, p.60) A common denominator might be that a conspiracy theory (CT) attributes “the ultimate cause of an event (usually one that is political or social) as a secret plot by a covert alliance of powerful individuals or organizations, rather than as an overt activity or natural occurrence.” (Douglas & Sutton, 2008, p.211). With minor variations, similar definitions appear in most recent publications, like CTs being an “unverified and relatively implausible allegation of conspiracy, claiming that significant events are the result of a secret plot carried out by a preternaturally sinister and powerful group of people” (Brotherton & French, 2014, p.238).

While such definitions bear a high face validity and match most well-established conspiracy theories, these approaches have severe shortcomings, neglecting fundamental theories of social and motivational psychology and the power of narratives as such. Mainly, we identified the problems of these approaches, because they

- a) do not regard the narrative structure of CTs,
- b) do not allow to compare CTs in terms of *strength* or *potency* (is more sinister a relevant comparison; is secrecy the key factor; or the power of the powerful individuals?), and they
- c) do not hint at the peoples’ motivation to believe such theories.

Already in 1994, Goertzel prompted to look for “underlying psychological processes” (p.739), although most definitions still do not incorporate structural, processual and motivational aspects at all. A more complex definition would allow for more specific hypotheses (and thus more specific empirical approaches), and it would be much easier to attack (and thus would bear more potential to be refined and developed).

For our approach, we suggest the following working definition that incorporates ideas by Melley (2000), Ganser (n.d.), Goertzel (1994) as well as some own qualitative empirical approaches (Raab, Ortlieb, Auer, Guthmann & Carbon, 2013):

*A conspiracy theory is the story of a hidden process that gets spotted by a small number of people. As their life and their personal values are affected by this process, these people try – together with other insiders – to uncover the workings of this process and make it public. The story usually includes an **odd event or threatening status quo**, some **evidence** supporting the existence of this secret process, a **non-transparency or distrust** concerning official and/ or usual sources, information about attempts to make the story **public**, a group of conspirers, and sometimes a **myth** (that is, beliefs that defy rational or empirical verification and are a matter of belief). It makes a difference if the group of conspirers has recognized the secret process, but does cover it up to gloss over negligence or*

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*incompetence (let it happen on purpose; **LIHOP**); or if the group of conspirers did actively start and support this process for its own benefit (make it happen on purpose; **MIHOP**).*

Our definition fits the *Stuttgart 21* movement where (in the beginning, a few) citizens found it odd why billions should be spent to re-build a train station underground. They gathered evidence supporting their view that members of the federal state government and the industries might actively promote this underground project for personal profit, and that official statements and media coverage might be biased. The citizens – mostly highly educated people from all ages holding democracy high – saw taxpayer's billions and values like democratic transparency at stake went public and started *Monday demonstrations*: a MIHOP-CT where values of democracy and good, sustainable governance were threatened. The unique feature here: not the conspirers (with government and big business being the usual suspects); but the train station that was to be buried underground and that became a symbol of backroom politics, buried information and burnt money (which can also be read on a metaphorical level, leaving the grounds of purely rational argumentation)

We deem it a promising approach to take the endangered values as pivotal point of a conspiratorial narrative here; to better understand why a seemingly trivial project like the re-structure and modernization of the infrastructure of a nearly 100 years old train station became the focal point of one of Germany's most dynamic movements of civil society in recent years.

### Values from a psychological perspective

To relate values to conspiracy theories, we need to make the concept of values more specific. Mainly, we want to link values to established psychological theories to make the topic of CT a genuine psychological one. Schwartz and Bilsky (1987, p.551) define values as "(a) concepts of beliefs, (b) about desirable end states or behaviors, (c) that transcend specific situations, (d) guide selection or evaluation of behavior and events, and (e) are ordered by relative importance".

Schwartz (2012) postulates six formal key features he deems crucial for values, regardless of a specific value's content. Four of these can be related directly to the *Stuttgart 21* protests:

- "Values are beliefs linked inextricably to affect. When values are activated, they become infused with feeling. People for whom independence is an important value become aroused if their independence is threatened [...]" (p.3)
- "Values refer to desirable goals that motivate action. People for whom social order, justice, and helpfulness are important values are motivated to pursue these goals." (p.3)
- "Values transcend specific actions and situations." (p.3)
- "Values serve as standards or criteria. Values guide the selection or evaluation of actions, policies, people, and events." (p.4)

The protesters were aroused, they had a clear-cut goal (no underground train station), and they pursued over the course of many months over a variety of situations. We might safely assume this was based on certain standards and criteria and not just a random group phenomenon.



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These basic principles Schwartz assumes paramount are like a universal form, becoming idiosyncratic for each person when filled with content related to them. Schwartz (2012) gives a rough categorization: Self-direction, stimulation, hedonism, achievement, power, security, conformity, tradition, benevolence, and universalism. Simplified even further, the content of values might be categorized with respect to *openness to change*, *self-transcendence*, *self-enhancement* and *conservation* (see Figure 1).

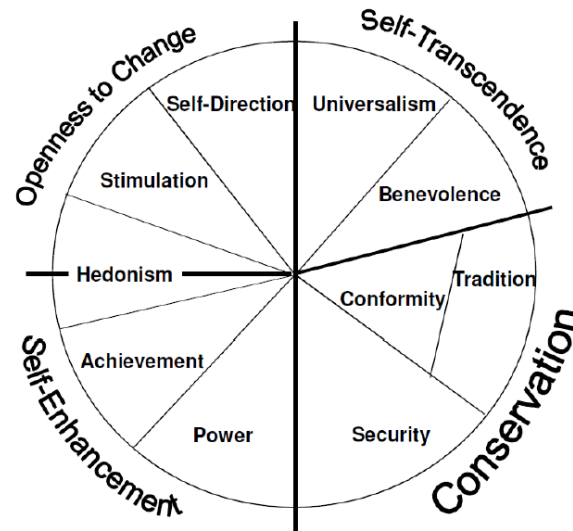


Figure 1: The circumplex model of values, taken from Schwartz, 2012, p.9.

Being aware that ex-post-adscriptions should be treated with caution, we might at least consider that people devoting time and energy in the *Stuttgart 21* protests did this for society as a whole (universalism) defending established democratic concepts (security and tradition).

So *Stuttgart 21* supports the idea of people tackling a supposed conspiracy that endangers their most important values. Although the train station project itself was not stopped, the protest eventually went along with the conservative party losing its absolute majority in the parliament for the first time in nearly 60 years, and even losing its participation in government. For the first time in the history of Germany, a member of the Green Party (called Bündnis 90/Die Grünen) became a federal Prime Minister.

Can a conspiracy theory be regarded a transport medium for personal values then? We tested this assumption empirically.



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### Method

The experiment took place at the University of Bamberg in summer 2014. It was inspired by the postulate by Raab et al. (2013) that a person will adapt to (or even construct a) conspiracy theory that portrays his or her most important values as endangered.

#### Material.

We compiled a set of statements following the scheme of *narrative construction* described in Raab, Auer, Ortlieb and Carbon (2013). All statements were related to the (fictitious) establishment of a new degree program called *Future Concepts of Humanity* set at a renowned German university (Freie Universität Berlin). While this specific institute was fictitious, similar institutions do exist. For example, the University of Oxford incorporates a *Future of Humanity Institute* that aims „to bring excellent scholarship to bear on big-picture questions for humanity“ (University of Oxford, 2014) Each statement could be attributed to either **interest group**:

- the archbishop of Berlin (representing conservation),
- the *Lesben- und Schwulenverband in Deutschland* [Gay and Lesbian Association Germany], an important LGBT NGO (representing openness to change),
- the business consultancy McKinsey (representing self-enhancement),
- left-wing student organizations (representing self-transcendence).

There was a statement for each **narrative element**:

- *group of conspirers* (which stated the motivation of the respective interest group to influence the establishment of the degree program), for
- *evidence* (supposed facts about the respective interest group), for
- *intransparency* (alluding to a cover-up) and for
- *myth* (a general belief related to the interest group).

Furthermore, each statement was flavored in three different ways regarding **conspiratorial intention**:

- official version: a statement that is compatible with the image the respective interest upholds itself,
- LIHOP: a statement that blames the interest group of endangering the planned study course by omitting helpful actions,
- MIHOP: the interest group is accused of actively undermining the study course project.

This resulted in 4 [interest group] x 4 [element] x 3 [intention] = 48 cards. Additionally, four cards with an *odd event* (linking each one of the interest groups separately to a sudden stop of negotiations concerning the *Future Concepts of Humanity* school) and four cards with blatantly absurd statements were added to the set as control items, resulting in 56 cards.

For example [interest group + narrative element + conspiratorial intention],

- archbishop + group of conspirers + official read: “The archbishop wants a chair for Roman-Catholic theology to be part of the projected school *Future Concepts of Humanity*”.

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- McKinsey + intransparency + LIHOP read: "McKinsey's press officer refuses to give any statements concerning the school *Future of Humanity* and a supposed amalgamation with the company's goals".
- left wing student groups + myth + MIHOP read: "Student protests, in the past and nowadays, show that these left-wing groups do not refrain from violence. The assassination of Rudi Dutschke and Benno Ohnesorg in Berlin are still motivating them to combat."
- the absurd item related to the gay & lesbian association read: "The Gay and Lesbian Association has gotten hold of chemicals that turn people gay. They are already infiltrating Berlin's water supply."

Additionally, we wrote a short characterization for each interest group. To frame the story, two journalistic texts (one about the concept for the projected school; and one about a conflict of interest that might lead to an ultimate failure of the school) were written and placed in the web layout of a renowned Berlin newspaper (see Figure 2).



Figure 2: A pseudo-journalistic text about the projected school "Future Concepts of Humanity" that was given to participants as a printout.

### Participants.

Thirty-five students of Bavarian universities (19 female; aged 19 to 30 years,  $M_{age}=23.6$  years) volunteered to take part in the study. Some of them received course credit for participation.

### Procedure.

Participants were given a printout of a pseudo-journalistic text (Figure 2) about the projected establishment of a new academy in Berlin called *Future Concepts of Humanity*. The text mentions that there is "dispute" as different stakeholders try to influence "topics as well as admission requirements" according to their own interests.

Then, they were given 24 cards containing (in random order) the statements for

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- 4 [interest group] x **group of conspirers** x 3 [intention]
- 4 [interest group] x **evidence** x 3 [intention]

and asked to read them carefully and to sort them into three packs labeled *plausible*, *indifferent* and *not plausible at all*. They were told they were free to choose, without time-restriction, and might pick solitary statements, but are also free to compile a coherent narration. In contrast to the procedure in Raab et al. (2013a), we decided to divide the narrative construction in two parts, to reduce implicit pressure a card set with nearly 60 cards might impose.

When finished, participants were given the second newspaper mock-up that stated the projected school was on the brink; but that sources were not willing to identify the stakeholders responsible for impending failure. They were then handed out

- 4 cards where, on each card, one of the four interest groups is given responsibility for the impending failure,
- 4 [interest group] x **intransparency** x 3 [intention] = 12 cards,
- 4 [interest group] x **myth** x 3 [intention] = 12 cards,
- 4 absurd statements.

Again, they were instructed to read them carefully and to sort them into three packs labeled *plausible*, *indifferent* and *not plausible at all*.

After they reported to have finished, participants were asked how plausible they deem the statements they have chosen, if they consider the chosen items to be a coherent story, and how interesting/ important/ fun/ thrilling they considered their engagement with the given topic.

After the narrative construction, participants filled out

- the German Portraits Value Questionnaire (PVQ) by Schmidt, Bamberg, Davidov, Herrmann and Schwartz (2007) that is constructed in accordance with Schwartz' value approach, the
- Short Schwartz's Value Survey (SSVS), developed by Lindeman and Verkasalo (2005), in a German translation by Boer (2014), the
- Generic conspiracist beliefs scale (GCB) by Brotherton, French & Pickering (2013), translated by us, and finally the
- Conspiracy Mentality Questionnaire (CMQ) by Bruder, Haffke, Neave, Nouripanah and Imhoff (2013).

Finally, participants were debriefed, concretely by uncovering the aims of the study and explicitly telling them that all events, statements and newspaper articles used in the study were completely fictitious and any resemblance to real events would be coincidental.

### Results

For the narrative construction, only the cards categorized as *plausible* were regarded. For each participant, we calculated four sums: one for the archbishop, one for the LGBT NGO, one for McKinsey and one for the student groups. Any card bearing an official statement contributed to the respective sum with 0, any bearing a LIHOP statement with 1 and any bearing a MIHOP statement

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with 2. As this kind of summation does not allow for statements about the underlying distribution, Kendall's  $\tau_b$  is used for correlating the narrative construction sums with the questionnaire results.

Summing up all four sub-scales (general conspiracy index, GCI), participants scored a median value of 15.00 ( $SD=10.32$ ), indicating that including LIHOP and MIHOP items was a common occurrence.

Plausibility of the selected items was rated at 4.89 on average (on a scale from 1=*not plausible at all* to 6=*very plausible*,  $SD=.68$ ) and did not correlate with the CGI ( $\tau_b=.01$ ,  $p=.92$ , *n.s.*) nor any of the four sub-scales.

There was no significant correlation between the four sub-scales resp. their aggregated sum with either the GCB or the CMQ general indicators. GCB and CMQ correlated with  $\tau_b=.52$ ,  $p<.001$ .

Comparing the four dimensions *openness to change*, *self-transcendence*, *self-enhancement* and *conservation* from the SVSS to the four sub-scales calculated from the narrative construction, only the scale for the Lesbian and Gay Association yielded significant results:

- The higher the value for openness to change, the lower the conspiracy score regarding the LGBT community ( $\tau_b=-.289$ ,  $p=.029$ ),
- The higher the value for conservatism, the higher the conspiracy score regarding the LGBT community ( $\tau_b=-.317$ ,  $p=.016$ ),
- The higher the value for self-transcendence, the lower the conspiracy score regarding the LGBT community ( $\tau_b=-.434$ ,  $p=.001$ ).

Relating our general conspiracy index to the SVSS scores, there was a negative correlation with self-transcendence ( $\tau_b=-.358$ ,  $p=.006$ ).

There was a number of significant correlations between the four subscales (see Table 1), indicating that there might be some general impetus for constructing a conspiracy theory, regardless of content.

Table 1: Intercorrelations for narrative dimension subscales.

$N=35$ , correlations are Kendall's  $\tau_b$

Interest group	1.	2.	3.	4.
1. Archbishop	1	$\tau_b=.307$ $p=.019$	$\tau_b=.473^{**}$ $p<.001$	$\tau_b=.304$ $p=.019$
2. LGBT	$\tau_b=.307$ $p=.019$	1	$\tau_b=.218$ $p=.092$	$\tau_b=.297^*$ $p=.022$
3. McKinsey	$\tau_b=.473^{**}$ $p<.001$	$\tau_b=.218$ $p=.092$	1	$\tau_b=.342^{**}$ $p<.007$
4. Left-Wing Students	$\tau_b=.304$ $p=.019$	$\tau_b=.297^*$ $p=.022$	$\tau_b=.342^{**}$ $p<.007$	1

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The correlations reported here with regard to the SVSS were similar for the Portraits Value Questionnaire (PVQ). The PVQ results are therefore not reported here.

One of the 35 participants included one of the absurd items in his/ her plausible set – the statement claiming that the LGBT community has contaminated the Berlin water supply with chemicals turning people gay.

### Discussion

The interest group *Gay and Lesbian Association Germany* was sensitive to our postulate of expressing personal values in conspiracy theories. The more important openness to change and self-transcendence were for our participants, the less LIHOP and MIHOP items pointing to a LGBT conspiracy were included in the course of events deemed plausible. On the other hand, conservative values went along with a higher inclination to deem a LGBT conspiracy plausible. Additionally, people expressing benevolence and universalism in the SVSS questionnaire were less prone to assume any kind of conspiracy.

The extent to which a participant's story contained LIHOP and MIHOP items was not related to self-assessed story plausibility, indicating that people were of the opinion to have constructed a *normal* story. This is confirmed by the fact that only once the absurd statement was held plausible. If participants had chosen a tongue-in-cheek attitude towards our study, we would have expected these absurd items to be included much more often – to spice up the conspiracy plot.

For upcoming studies, the interest groups used to represent the four basic value dimensions should be refined. While the LGBT items were sensitive, we could not ascertain significant value-conspiracy-relations for the other dimensions. For our sample consisting of students only, the archbishop of Berlin as well as McKinsey might not be related to conservatism resp. self-enhancement at all. And while issues of gender justice and alternative ways of life are part of social discourse, there is virtually no organized left-wing student activity at a Bavarian university. Defining interest groups matching the target sample would be crucial for further research.

We were surprised that no relation between the narrative construction and the two scales GCB and CMQ could be ascertained. In the narrative construction, people have the opportunity to build a conspiracy theory – spontaneously and self-directed. We consider this procedure to bear a high validity, as the behavior in question – constructing a conspiracy theory – is actually shown. Experiments with larger samples would have to explore which aspects of narrative constructions can be mapped to the questionnaires, and which aspects make the difference.

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### General Discussion

The inclusion of personal values into research paradigms on conspiracy theories could help to enrich our understanding of this multi-faceted phenomenon: people constructing stories, in which the protagonists – by negligence or with full intent – harm people for profit/ for power/ for building a New World Order/ just for the sake of being evil. While individual dispositions allow for insights why some *kinds* of person show a stronger inclination for conspiratorial explanations, the content of such an explanation will reveal much about the person's motivation, her fears, her desires, and will also tell us something about the kind of society this person wants to live in.

Thinking and communicating in terms of values, and not in terms of personality traits, might also help us to meet people holding up conspiracy theories at eye level. A person who already has lost his or her faith in institutions is not very likely to be impartial when traits like neuroticism and agreeableness are discussed. The fear of being pegged as a neurotic grumbler would, for example, preclude a longitudinal study where mutual esteem is essential. A value-based approach – like the one by Schwartz discussed here; yet, psychology does offer more value concepts – offers dimensions that do not have a *bad end*.

We have considered conspiracy theories as a means of expressing personal values. However, that does not mean conspiracy theories are in any case a harmless instrument of self-actualization. With *Stuttgart 21*, for instance, being part of the movement against the underground train station might help participants

- to become clear about one's own values,
- to stand up for these values and
- to become part of a dynamic movement.

The downside to this: already weak attitudes and latent prejudice might be sufficient to enter a circle of value reinforcement, shifting of the range of facts deemed plausible (we have called this the *Sarrazin Effect*, Raab et al., 2013a) and, eventually, radicalization. Portraying *the others* as disguised evil-doers runs the risk of eroding mutual respect. Commitment can become resentment, and, in the end, democratic principles might get devalued.

In the case of *Stuttgart 21*, this would be somewhat ironic, as the movement's predominant goal was to enhance democratic participation. Yet, the survey by Bebnowski et. al (2010) indicates that even a grass-roots movement for the best, framed in a conspiratorial narration, is a balancing act. The question "Political parties are still able to solve political problems" (p.17) was asked on a scale from 0 ("I do not agree at all") to 10 ("I completely agree"). Nearly half of the 908 valid answers – 45.4 % – was 0, 1 or 2; in other words, people reported a substantial loss of trust in our political associations. A conspiracy theory about democratic failure has become a self-fulfilling prophecy.

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### References

- Bebnowski, D., Hermann, C., Heyne, L., Hoeft, C., Kopp, J., and Rugenstein, J. (2010). Neue Dimensionen des Protests? Ergebnisse einer explorativen Studie zu den Protesten gegen Stuttgart 21. [New dimensions of protest? Results from an explorative study regarding the Stuttgart 21 protests.] Retrieved from <http://www.demokratie-goettingen.de/content/uploads/2010/11/Neue-Dimensionen-des-Protests.pdf>
- Boer, D. (2014). SSVS-G. Short Schwartz's Value Survey - German. In C. J. Kemper, E. Brähler & M. Zenger (Hrsg.), *Psychologische und sozialwissenschaftliche Kurzskalen. Standardisierte Erhebungsinstrumente für Wissenschaft und Praxis* (S. 299–302). Berlin: MWV Medizinisch Wissenschaftliche Verlagsgesellschaft.
- Brotherton, R., French, C. C. & Pickering, A. D. (2013). Measuring belief in conspiracy theories: the generic conspiracist beliefs scale. *Frontiers in Psychology, 4*.
- Brotherton, R. and French, C. C. (2014). Belief in Conspiracy Theories and Susceptibility to the Conjunction Fallacy. *Appl. Cognit. Psychol.*, 28: 238–248. doi: 10.1002/acp.2995
- Bruder, M., Haffke, P., Neave, N., Nouripanah, N. & Imhoff, R. (2013). Measuring individual differences in generic beliefs in conspiracy theories across cultures. Conspiracy Mentality Questionnaire. *Frontiers in Psychology, 4*.
- Douglas, K.M. & Sutton, R.M. (2008). The hidden impact of conspiracy theories: Perceived and actual influence of theories surrounding the death of Princess Diana. *Journal of Social Psychology, 148*, 210–221.
- Ganser, D. (n.d.). 9/11 Untersuchen [Investigating 9/11]. Retrieved from <http://911untersuchen.ch/wissenschaft/daniele-ganser/>
- Goertzel, T. (1994). Belief in conspiracy theories. *Polit. Psychol.* 15, 731–742. doi:10.2307/3791630
- Jolley, D. (2013). New Voices: Are conspiracy theories just harmless fun. *The Psychologist, 26*(1), 60-62.
- Lindeman, M. & Verkasalo, M. (2005). Measuring Values With the Short Schwartz's Value Survey. *Journal of Personality Assessment, 85* (2), 170–178.
- Melley, T. (2000). *Empire of Conspiracy: The Culture of Paranoia in Postwar America*. Ithaca, NY: Cornell University Press.
- Raab, M. H., Auer, N., Ortlieb, S. A. & Carbon, C.-C. (2013a). The Sarrazin effect: the presence of absurd statements in conspiracy theories makes canonical information less plausible. *Frontiers in Psychology, 4*.
- Raab, M. H., Ortlieb, S. A., Auer, N., Guthmann, K. & Carbon, C.-C. (2013b). Thirty shades of truth: conspiracy theories as stories of individuation, not of pathological delusion. *Frontiers in Psychology, 4*.
- Schmidt, P., Bamberg, S., Davidov, E., Herrmann, J. & Schwartz, S. H. (2007). Die Messung von Werten mit dem <<Portraits Value Questionnaire>>. *Zeitschrift für Sozialpsychologie, 38* (4), 261–275.
- Schwartz, S. H. & Bilsky, W. (1987). Toward A Universal Psychological Structure of Human Values. *Journal of Personality and Social Psychology, 53* (3), 550–562.
- Schwartz, S. H. (1994). Are There Universal Aspects in the Structure and Contents of Human Values? *Journal of Social Issues, 50* (4), 19–45.
- Schwartz, S. H. (2012). *An Overview of the Schwartz Theory of Basic Values*, Online Readings in Psychology and Culture. Retrieved from <http://scholarworks.gvsu.edu/cgi/viewcontent.cgi?article=1116&context=orpc>
- Stuttgarter Zeitung (2013, August 26). Strafbefehle wegen Wasserwerfereinsatz. [Penalty Orders because of water cannon use]. Retrieved from <http://www.stuttgarter-zeitung.de/inhalt.stuttgart-21-strafbefehle-wegen-wasserwerfereinsatz.e48f2355-0ef1-4d74-9b8f-8d4abd87e280.html>

## A.4 Conspiracy belief and personal beliefs

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Südwestrundfunk (2014, July 23). Historie des Bahnprojekts Stuttgart 21. [History of the train project Stuttgart 21]. Retrieved from <http://www.swr.de/landesschau-aktuell/bw/stuttgart21-chronologie-historie/-/id=1622/nid=1622/did=6730358/peyg96/index.html>

Swami, V., and Coles, R.(2010).The truth is out there. *Psychologist* 23, 560–563.

University of Oxford (2014). Future of Humanity Institute. Retrieved from <http://www.fhi.ox.ac.uk/research/research-areas/>

Wood, M.J., Douglas, K.M., and Sutton, R.M.(2012). Dead and alive: beliefs in contradictory conspiracy theories. *Soc. Psychol. Personal. Sci.* 3, 767–773.doi: 10.1177/1948550611434786

Zeit Online (2014, August 3). EU prüft Kungelei zwischen Bahn und Baden-Württemberg. [EU is examining wheeling and dealing between Deutsche Bundesbahn and Baden-Württemberg.] Retrieved from <http://www.zeit.de/wirtschaft/2014-08/stuttgart-21-eu-baden-wuerttemberg>



Semantical cues and conspiracy formation

### Research Article

## Conspiracy formation is in the detail: On the interaction of conspiratorial predispositions and semantical cues

### Abstract (150 words)

Significant events are frequently followed by discussions about the event's 'true nature'. Yet, there is only little evidence of whether the judgments of *conspiracy believers* and *sceptics* are *a priori* determined, or if certain characteristics of information are responsible for provoking such a polarization. We investigated how depicted causation (direct vs. indirect; Study 1) and intention (purposeful vs. non-purposeful; Study 2) might invoke a bias in *believers* and *sceptics* regarding an ongoing event, namely: Whether US investigations against FIFA were more or less likely to be seen as a conspiracy against Russia to sabotage the World Cup in 2018. We revealed that the judgments of *conspiracy believers* and *sceptics* about the event's 'true nature' are not *a priori* divided—in fact, conspiracy beliefs are only affected when direct causation and purposeful intentions were obvious. Results point to the relevance of semantical cues affecting conspiratorial predispositions and their role in conspiracy formation.

**Keywords:** conspiracy beliefs; conspiratorial predispositions; Ukraine Crisis; semantics; intention; causation

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### Introduction

Wednesday, 05/27/2015: *After US investigations, seven top FIFA officials were arrested on suspicion of corruption.*

Thursday, 05/28/2015: *US prosecutors opened criminal proceedings related to the awarding of the Russian World Cup in 2018.*

Would you, based on the information given, accept or reject the idea that the entire investigation against FIFA<sup>1</sup> was a conspiracy by the USA to harm Russia? Or, to put it another way: Were US investigations against FIFA only used as a proxy conflict scenario for the Ukraine Crisis<sup>2</sup> to put the Russian World Cup in 2018 at risk?

The answer will in part depend on your personality, since previous research has explored the important role of individual differences as predictors for an increased belief in conspiracies (e.g., Swami, Chamorro-Premuzic, & Furnham, 2010; Swami & Furnham, 2014). Indeed, the belief in conspiracies, where people see “multiple actors working together with a clear goal in mind, often unlawfully and in secret” (Swami & Furnham, 2014, p. 220), is a common phenomenon. A national survey of the New York Times (1992) revealed that more than 70 percent of Americans believe that Lee Harvey Oswald did not act alone in the assassination of John F. Kennedy, and a significant number of people doubt that the 9/11 attacks were exclusively initiated by al-Qaeda (Swami et al., 2010). Although the contents of conspiracy theories show considerable variety (Fenster, 1999), the wide circulation of such beliefs illustrates an important psychological issue: Personal beliefs about the ‘true nature’ of an upcoming political event might be affected by the extent to which someone generally accepts or rejects conspiracy theories in that field of discourse.

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<sup>1</sup> *Fédération Internationale de Football Association*

<sup>2</sup> We refer to the international political crisis that was provoked most recently by the annexation of Crimea by Russia (Costea, 2014).

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### *Individual differences in conspiracy belief*

Many studies have confirmed the idea that the interpretation of a new issue is dependent on already existing attitudes (Kruglanski, 2004), and indeed, people who believe in one conspiracy (i.e., having a high conspiratorial predisposition<sup>3</sup>) tend to believe in others as well (e.g., Abalakina-Paap, Stephan, Craig, & Gregory, 1999; Wood, Douglas, & Sutton, 2012), whereas people with low a conspiratorial predisposition are more skeptical towards the occurrence of a conspiracy (Leman & Cinnirella, 2013). Some authors argue that conspiracy believers—in contrast to conspiracy sceptics—often build their convictions about ongoing events irrationally (Clarke, 2002) and tend to overestimate the likelihood of co-occurring events, which is conducive to resulting in a conjunction fallacy (Brotherton & French, 2014). Additionally, conspiracy belief seems to be associated with a general tendency to attribute agency and intentionality where it is unlikely to be in effect (Douglas, Sutton, Callan, Dawtry, & Harvey, 2016). Taken together, these findings imply a rather stable personality trait, and consequently, conspiracy beliefs about upcoming major events should inherently differ for people with a low or high conspiratorial predisposition. However, this is somewhat contradictory to findings that people judge ongoing events with hypotheses regarding the information being presented (Klayman & Ha, 1987).

### *Information characteristics and conspiracy belief*

People seem to have a general tendency to interpret information that is in line with their own beliefs and to dismiss alternative possibilities that challenge these beliefs. This so-called *confirmation bias* is a well-documented phenomenon that has been supported by many investigations (for an overview see Nickerson, 1998). However, only little is specifically known about how a confirmation bias for those with high and low

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<sup>3</sup> Relying on previous research, we define *conspiratorial predispositions* as an individual's underlying tendency to view the world in conspiratorial terms (Uscinski, Klofstad, & Atkinson, 2016).

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conspiratorial predispositions emerges. First insights showed that the characteristics of the presented evidence for and against a conspiracy theory influenced participants' attribution of the likelihood of a conspiracy (Leman & Cinnirella, 2013; Warner & Neville-Shepard, 2014). Raab, Auer, Ortlieb, and Carbon (2013) reported that when extreme statements regarding the events of 9/11 were present, people tended to tell the contextual relations in a more conspiratorial way. On the other hand, people with distinct conspiratorial predispositions do not seem to differ in their conclusions about unrelated, randomly occurring information (Dieguez, Wagner-Egger, & Gauvrit, 2015). In this manner, Uscinski et al. (2016) have found that information cues need to be met by an individual's predisposition towards a conspiracy to become effective. More specifically, Bost and Prunier (2013) found evidence that the distinct perception of a motive for a conspirator additionally leads to a higher belief in a conspiracy itself. However, what is still missing is a systematical approach that compares the semantic linkage of information, i.e., the semantics of intent and responsibility with its interdependencies, to the emergence of such a confirmation bias in the field of conspiracy beliefs. In the present studies we investigated how specific semantical cues affect the formation of conspiracy beliefs for those with high vs. low conspiratorial predispositions.

### **The present research**

Our research focused on a systematical approach that links manipulated *perceived causation* and an actor's *supposed intention* towards an upcoming event to the confirmation of conspiratorial predispositions. We were aiming to find the structure of information needed to accept or reject a conspiracy belief for people with high and low conspiratorial predispositions. More specifically, we were interested in what it takes for participants to make a distinct judgement in the form of an *event-based conspiracy theory* (Barkun, 2013); that is: Under what circumstances are some people willing, and at the

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same time others reluctant, to spot an organization that is systematically and secretly pursuing its goals by manipulating specific important events? We decided to take a very recent topic from the news to a) attract people to the study and b) test our hypotheses under ecologically valid conditions. We took on the opportunity of examining US investigations against FIFA for a number of theoretical reasons:

- The US government frequently features in conspiracy theories.
- The Ukraine Crises raised public awareness to the fact that NATO (mainly comprising the USA) and Russia were becoming enemies once again.
- The link between US investigators, FIFA and consequences for the Russian World Cup in 2018 was a new one.
- The opacity of the organization 'FIFA' and the complexity of the investigations left room for speculation beyond the official statements.
- As we conducted our studies right after the initial media coverage, our participants didn't have time to read about (or elaborate for themselves) a conspiratorial interpretation of this course of events.

In sum, we took the opportunity to investigate a current political topic where participants had a comparably low level of prior knowledge and where no conspiratorial narratives were already circulating. Our experimental approach was derived from theoretical deliberations that describe causation and an actor's purposeful intention as one of the main aspects of evidence-based judgements about harmful events (Alicke, 2000; Heider, 1958; Schlenker, Britt, Pennington, Murphy, & Doherty, 1994; Weiner, 1995). We adopted those viewpoints with regard to political conspiratorial predispositions and applied it to an ongoing event; namely, to the question of whether US investigations against FIFA were more or less likely to be seen as an action against Russia to prevent the scheduled World Cup in 2018.

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### *Semantic linkage of information influencing judgments*

As described, there are at least two main aspects people might consider when judging someone's responsibility for the occurrence of an event: causation and intention.

#### *Causation*

A direct causation is given when event A leads to result B. The strength of the perceived causal impact is predicted by proximity in the chain of events producing a specific outcome (Alicke, 2000). For example, when event A leads to result B, which in addition results in event C, the causal impact for A being the reason for result C is lower (indirect causation) than for A being the cause for result B (direct causation). Research on causal control is complex and can include and combine desire and foresight (Alicke & Rose, 2012); yet for our purpose we refer to the dimension of direct and indirect causality only to gather new insights into conspiracy research. We hypothesize that a confirmation bias about a possible conspiracy—for people with low vs. high conspiratorial predispositions—will only become effective when an actor is clearly depicted as the direct cause of a possible conspiracy: here, US investigations being responsible for a possible reallocation of the Russian World Cup. We suppose that an indirect causal depiction does not induce a conspiratorial conclusion; neither for those with a low conspiratorial predisposition to reject, nor for those with a high conspiratorial predisposition to accept a secret plot. This assumption is supported by findings that people with distinct conspiratorial predispositions do not differ in their conclusions about unrelated, randomly occurring information (Dieguez et al., 2015).

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### *Intention*

The action of agent A leading to result B can either be purposeful, which means *Make it Happen on Purpose (MiHoP)*, or non-purposeful in terms of *Let it Happen on Purpose (LiHoP)* as proposed by Ganser (2006) — for similar concepts see Alicke (2000) and Heider (1958). With LiHoP, important changes are side-effects of a powerful agent's actions, tacitly approved, but without being the agent's main goal. In Alicke's (2000) terms, this would correspond to moderate volitional control (as the side-effects are known and approved of). Under a MiHoP assumption, on the other hand, the agent is attributed with high volitional *and* causal control. These different *intentions* can have a great impact on the assessment of who is responsible. People acting purposefully to produce harmful events are more likely to be blamed than people acting non-purposefully (Schlenker et al., 1994). Therefore, we hypothesize that depicting US investigations as a purposeful act (MiHoP) intended to harm Russia will lead to a confirmation bias about a possible conspiracy with regard to participants' conspiratorial predispositions. On the other hand, the non-purposeful depiction (LiHoP) offers an interesting view; regardless of whether agent A acted volitionally or not in producing result B, there remains a direct causation of result B by agent A (Malle, Guglielmo, & Monroe, 2014). Based on previous findings that the motive of a conspirator has a bigger impact on conspiracy beliefs than the strength of presented information (Bost & Prunier, 2013), we hypothesize that depicting consequences for the Russian World Cup as a non-purposeful side effect does not lead to a biased belief in a conspiracy with regard to participants' predisposition.

### General Method

#### Procedure and Materials

We conducted Study 1 and Study 2 simultaneously to ensure maximum comparability; that is, to minimize the effects that might stem from dynamics in the media, from public debate or from new insights into the investigations against FIFA becoming public in the meantime. We started surveying only two days after the US investigations were revealed; that is, on Friday, 29<sup>th</sup> of May 2015 at 10:00 a.m. (Central European Time; CET) and finished on the same day at 04:00 p.m. (CET). The required sample size was calculated beforehand by the G\*Power software program (Faul, Erdfelder, Lang, & Buchner, 2007) with the assumptions for linear multiple regression of  $\alpha = .05$ ,  $1-\beta = .95$ , anticipating a medium effect size of  $R^2 = .15$  and two tested predictors yielding an  $n$  per condition of at least 47. All participants were randomly assigned to Study 1 or Study 2 and to one of the conditions.

To conceal the intent of the studies, participants were asked to take part in a study concerning opinions about recent media coverage. First, participants gave written sociodemographic information; how much they are into football in general and how much they had followed the current FIFA investigations via the media (both on a 6-point Likert scale). Then, participants were asked to carefully read a short (fabricated) journalistic-style text that summarized the current state of affairs regarding the investigations. The beginning of the text was the same for every condition, in Study 1 as well as Study 2, and incorporated the latest state of affairs (Thursday, 28<sup>th</sup> of May 2015 at 09:00 p.m. (CET):

*Zurich/New York (\*\*\*\*\*) – US Attorney General Loretta Lynch defended the investigations against world football federation FIFA, and the detention of seven FIFA officials in Zurich, at a press conference in New York. “This kind of corruption and the bribery in international soccer has been going on for two decades.” US authorities are accusing the seven detained FIFA officials of*



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*corruption over a period of at least 24 years. "They corrupted the worldwide soccer business to enrich themselves." said Ms. Lynch. "They have done it again and again, year after year, tournament after tournament."*

The text of every condition was unique in one to two sentences appended at the end of the main text. In these sentences we implemented hints of direct and indirect causation (Study 1) as well as purposefully (*MiHoP*) and non-purposefully (*LiHoP*) made actions (Study 2) indicating that US investigations could be seen as an attempt to harm Russia.

After reading the (fabricated) news article, participants were asked to answer twelve items, which were displayed on the same page as the article. The instructions clearly asked to give a personal assessment for each question. All items had to be answered on a 6-point Likert scale (1 = *I do not agree at all*, 6 = *I fully agree*). Four out of the twelve items<sup>4</sup> were *a priori* generated to evaluate whether participants believed that the US investigations were a political conspiracy against Russia, namely:

- "The investigations are part of a global power game" ,
- "The USA is trying to harm Russia with their investigations",
- "The investigations becoming public right now is no coincidence",
- "FIFA is just a pawn sacrifice in the USA's striving for global dominance".

Responses to these four items were averaged to form the single indicator *conspiracy belief* ( $M_{grand} = 3.55$ ,  $SD = .99$ ; Cronbach's  $\alpha = .73$ ).

Additionally, as the last part of the procedure before debriefing, we asked participants to fill out the subscale *government malfeasance* of the *Generic Conspiracist Beliefs* (GCB) scale by (Brotherton, French, & Pickering, 2013) to test for conspiratorial predispositions. The GCB is a measure of conspiracy ideation which does not refer to any

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<sup>4</sup> Four of the remaining items were generated for a different research question concerning the political implications of the affair. The other four were filler items asking for participants' judgement about recent media coverage related to our cover story. The full item list is available upon request from the authors.

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real-world events, but rather measures the general endorsements of conspiracies upon content-related subscales. The subscale consisted of three items<sup>5</sup>:

- “The government is involved in the murder of innocent citizens and/or well-known public figures, and keeps this a secret”,
- “The government permits or perpetrates acts of terrorism on its own soil, disguising its involvement”,
- “The government uses people as patsies to hide its involvement in criminal activity”.

Responses to these items were averaged to the single indicator *conspiratorial predispositions* ( $M_{grand} = 2.90$ ,  $SD = .98$ ; Cronbach’s  $\alpha = .76$ , i.e. “acceptable” scale quality) for the assumptions of general conspiracies within governments. Finally, participants were debriefed and thanked for their attendance in the 10-min procedure.

### Study 1

#### Participants and design

In Study 1 we tested whether direct or indirect causation might lead to the activation of a conspiratorial predisposition. The participants were one hundred and two volunteers recruited on the University of \*\*\*\*\*, \*\*\*\*\*. Five participants had to be removed from further analysis due to incomplete filling in of the questionnaire (two or more dependent items missing), with ninety-seven participants remaining (51 female;  $M_{age} = 24.4$  years,  $SD = 5.2$ ). Our approach followed the implication that an indirect causation between A and C is given when A affects B and B affects C, whereas a direct causation occurs when action A directly affects C (Figure 1). To test this assumption and to increase to ecological

<sup>5</sup> We asked participants to fill in the *government malfeasance* scale after the treatment, to prevent the content of the GCB from acting as a trigger regarding conspiratorial thinking. Since this scale is a trait questionnaire and statistical analysis of the subscale *government malfeasance* showed no significant effects regarding the treatment in Study 1,  $F(1,95) < 1$ ,  $p = .713$ , and Study 2,  $F(1,98) < 1$ ,  $p = .672$ , we regard it as an independent variable. Additionally, the *government malfeasance* scores did not differ significantly across the four conditions regarding Study 1 and Study 2,  $F(3,193) < 1$ ,  $p = .912$ .

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validity of the original studies, we conducted a manipulation check with the same texts but a different sample ( $N = 20$ ; 11 male;  $M_{age} = 25.6$  years,  $SD = 8.0$ ). Here, participants had to rate the following item on a semantic differential scale (1 = *indirect*; 7 = *direct*) for both texts: “To what extent are the US investigations described as a direct or indirect causation that might affect Russia’s hosting of the World Cup in 2018?”

### *Direct causation:*

To imply a direct connection between the US investigations and Russia, we needed to express that the World Cup in Russia is at risk *because* of the US investigations. Therefore, we added a sentence implying the direct linkage of the investigations and a possibly endangered World Cup. The end of the text read: “*There is the suspicion ‘that there have been irregularities in the allocations for the World Cups in 2018 (Russia) and 2022 (Qatar).’ This might lead to a reallocation of the upcoming World Cups. Due to the US investigations, the carrying out of the World Cup in Russia in three years is no longer certain*”. The direct causation was basically expressed by the last sentence, referring to US investigations as the cause that might affect the Russian World Cup.

### *Indirect causation:*

The aim of the condition “indirect causation” was to draw an indirect connection between US investigations against FIFA and their implications for Russia, namely the possible withdrawal of the World Cup. The logical implication was that US investigations revealed corruption within FIFA (described in the text that is common to all conditions), which in turn uncovered irregularities in the allocation of the upcoming World Cups (including the one in Russia), thus possibly leading to a reallocation. In other words: While there is still a linkage between investigations and the World Cup, the linkage should be weak and indirect (Figure 1). Therefore, we rephrased the last sentence of the direct causation

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condition: “*There is the suspicion ‘that there have been irregularities in the allocations for the World Cups in 2018 (Russia) and 2022 (Qatar).’ This might lead to a reallocation of the upcoming World Cups. The investigations additionally led to political discussions beyond FIFA*”. Since the main text described that US investigations uncovered corruption within FIFA, the second sentence gave the hint that this might also affect the upcoming World Cups, which included the one in Russia but did not explicitly refer to it.

*insert Figure 1 about here*

### Results

#### *Manipulation Check*

Using a different sample, we tested whether the text in both conditions does in fact indicate a direct rather than an indirect causation of U.S investigations thwarting Russia. As expected, participants perceived a higher direct coherence of US investigations affecting the Russian World Cup in the direct causation condition ( $M = 4.30$ ,  $SD = 1.87$ ) than in the indirect causation condition ( $M = 3.15$ ,  $SD = 1.63$ ),  $F(1,19) = 4.90$ ,  $p = .039$ ,  $\eta_p^2 = .205$ . Results confirmed our assumption that both conditions indeed induce the predicted semantic linkage of direct vs. indirect causation.

#### *Conspiracy belief*

To test our prediction that only direct causation will activate a conspiratorial predisposition, we regressed conspiracy belief scores onto *causation condition* (direct vs. indirect; dummy coded), *conspiratorial predisposition* (continuous and centered), and their interaction<sup>6</sup>. The overall model was significant,  $F(3,93) = 6.41$ ,  $p < .001$ ,  $R^2 = .171$ .

<sup>6</sup> We controlled for participants' previous knowledge about the FIFA investigations (“*How much have you been following the current FIFA investigations via the media?*” on a 6-point Likert scale) in Study 1 and

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Regression analysis showed a main effect for *conspiratorial predisposition*  $\beta = .36$ ,  $SE = .09$ ,  $t(93) = 3.78$ ,  $p < .001$ ,  $R^2 = .127$ , 95%  $CI_{\beta} = [.17, .54]$ , but none for *causation condition*  $\beta = -.12$ ,  $SE = .19$ ,  $t(93) = -.62$ ,  $p = .535$ ,  $R^2 = .002$ ,  $CI_{\beta} = [-.50, .26]$ . The two-way interaction, however, turned out to be significant,  $\beta = .41$ ,  $SE = .19$ ,  $t(93) = 2.18$ ,  $p = .032$ ,  $R^2 = .042$ , 95%  $CI_{\beta} = [.04, .78]$ . The interaction is plotted in Figure 2 at one standard deviation above and below the centered mean of conspiratorial predispositions (Aiken & West, 1991). A simple slope analysis revealed that conspiratorial predispositions significantly and positively predicted conspiracy belief in the direct causation condition,  $\beta = .56$ ,  $SE = .13$ ,  $t(93) = 4.22$ ,  $p < .001$ , 95%  $CI_{\beta} = [.30, .82]$ , but not in the indirect causation condition,  $\beta = .15$ ,  $SE = .13$ ,  $t(93) = 1.11$ ,  $p = .268$ , 95%  $CI_{\beta} = [-.17, .41]$ .

*insert Figure 2 about here*

### Discussion

The results of Study 1 support our hypothesis that a confirmation bias regarding a possible conspiracy for those with high vs. low conspiratorial predispositions only occurs when participants are confronted with the implication of a direct causation. Confronted with indirect causation, participants' conspiratorial predispositions did not predict their belief in a US conspiracy. We consider this to be the first piece of evidence that a biased belief in conspiracies about ongoing events does not emerge 'out of nowhere'; it requires a direct causation to confirm conspiratorial predispositions.

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Study 2 to check for prejudice-based judgments. We found no significant influence on our reported effects. Therefore, and to simplify our presentation of results, we do not report this variable in further descriptions.

### Study 2

#### Participants and design

In Study 2 we tested whether the depiction of US investigations being a purposeful or non-purposeful act to harm Russia would provoke a confirmation bias in conspiracy belief. One hundred and one participants took part in this study and were recruited on the campus of the \*\*\*\*\*, \*\*\*\*\*. One participant did not fill out the *government malfeasance* scale and had to be removed from further analysis, resulting in one hundred volunteers being analyzed (65 female;  $M_{age} = 25.8$  years,  $SD = 6.4$ ). The main text was the same as in Study 1. Again, we conducted a manipulation check with the purposeful and non-purposeful texts using a different sample ( $N = 21$ ; 15 female;  $M_{age} = 24.1$  years,  $SD = 6.6$ ). Participants had to rate the following item on a semantic differential scale (1 = *non-purposeful*; 7 = *purposeful*) for both texts: “To what extend are the US investigations described as a non-purposeful or purposeful act to affect the holding of Russia’s World Cup in 2018?” Using the same item as in Study 1, we tested additionally for direct vs. indirect causation since we hypothesized that the non-purposeful condition might also imply a moderate direct causation.

#### *Purposeful intention (Make it Happen on Purpose; MiHoP):*

To examine whether the description of a purposefully-intended plot against Russia would have any effects on participants’ conspiracy beliefs, the text had to imply a direct and deliberate link between US investigations and negative consequences for Russia. Therefore, we added: “*There is the suspicion ‘that there have been irregularities in the allocations for the World Cups in 2018 (Russia) and 2022 (Qatar).’ The Russian president subsequently denounced the act as a plot against Russia to impede the Russian World Cup in three years: ‘The USA and the media are trying in an obvious campaign to harm Russia*

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*and to have the World Cup withdrawn', said Vladimir Putin". Thus, US investigations were depicted as if the USA were Making it Happen on Purpose (MiHoP).*

*Non-purposeful intention (Let it Happen on Purpose; LiHoP):*

The non-volitional intention was described as follows: *"There is the suspicion 'that there have been irregularities in the allocations for the World Cups in 2018 (Russia) and 2022 (Qatar). This might lead to a reallocation of the upcoming World Cups. Some members of the Russian Duma now accuse the USA of approvingly accepting the consequences of a withdrawal of the Russian World Cup in three years as a result of their actions"*

Consequences for the Russian World Cup were thus depicted as a side effect, a *Let it Happen on Purpose* (LiHoP) attitude, without assuming an intentional link between investigations and consequences.

### Results

*Manipulation check*

We tested with a different sample whether the text in both conditions does in fact indicate a purposeful (MiHoP) rather than a non-purposeful (LiHoP) intention of the U.S trying to harm the Russian World Cup. As predicted, participants perceived an increased intentional behavior of the US investigations against the Russian World Cup in the MiHoP condition ( $M = 5.62$ ,  $SD = 1.36$ ) compared to the LiHoP condition ( $M = 4.29$ ,  $SD = 1.71$ ),  $F(1,20) = 9.26$ ,  $p = .006$ ,  $\eta_p^2 = .316$ . Results confirmed our assumption that both conditions really induce the predicted semantic linkage of purposeful vs. non-purposeful intention. Additionally, comparing causation ratings for the MiHoP vs. LiHoP condition to the *direct causation* condition in Study 1 showed no statistical difference, all  $t_s < 1.63$ ,  $p_s > .111$ . Therefore, we assume that a direct causal connection is also present in the MiHoP as well as the LiHoP condition.

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### *Conspiracy belief*

With respect to our hypothesis that only purposeful intentions activate conspiratorial predispositions, we will analyze main and interaction effects for *purposeful intention* (MiHoP) vs. *non-purposeful intention* (LiHoP). To test our prediction, we regressed conspiracy belief scores onto *intention condition* (MiHoP vs LiHoP; dummy coded) as well as onto *conspiratorial predisposition* (continuous and centered), also looking at the interaction between these variables. The overall model with the predictors *intention condition* and *conspiratorial predisposition* was significant,  $F(3,96) = 6.18, p < .001, R^2 = .162$ . We found a main effect for *conspiratorial predisposition*  $\beta = .34, SE = .10, t(96) = 3.31, p = .001, R^2 = .130, 95\% CI_{\beta} = [.13, .54]$ . There was no main effect for *intention condition*  $\beta = -.10, SE = .18, t(96) = -.53, p = .586, R^2 = .003, 95\% CI_{\beta} = [-.46, .26]$ , whereas the interaction effect was marginally significant,  $\beta = .37, SE = .20, t(96) = 1.82, p = .073, R^2 = .029, 95\% CI_{\beta} = [-.04, .77]$ . Simple slope analysis showed that conspiratorial predispositions significantly and positively predicted conspiracy belief in the MiHoP condition,  $\beta = .52, SE = .12, t(96) = 4.22, p < .001, 95\% CI_{\beta} = [.27, .77]$  but not in the LiHoP condition,  $\beta = .15, SE = .16, t(96) = .95, p = .346, 95\% CI_{\beta} = [-.17, .47]$  (Figure 3).

*insert Figure 3 about here*

### **Discussion**

The depiction of US investigations as a purposeful act to harm Russia provoked the predicted polarization of the belief in a US conspiracy for those with high vs. low conspiratorial predispositions. Even more interestingly, the non-volitional depiction failed to evoke this effect, although a direct connection between US investigations and their effect on Russia could have been inferred. The results support our findings from Study 1: A confirmation bias between conspiracy believers and skeptics about ongoing events is not



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effective *a priori*. It might instead be linked to distinctive, evidence based judgments; here, the depiction of an actor's purposeful intention.

### General discussion

The aim of our work was to investigate whether the judgments of *conspiracy believers* and *sceptics* about an ongoing event were *a priori* determined, or if semantical cues like causation and intention might be responsible for provoking such a polarization. Our results indicate that a polarization regarding a supposed conspiracy in an ongoing political event—for those with high vs. low conspiratorial predispositions—is not permanently in effect. Instead, this could be interpreted as a bias becoming active only when a direct causation or a purposeful intention is depicted, but not for the depiction of indirect causation or non-purposeful intention. Furthermore, the actor's intention seems to play a major role in conspiracy formation since the non-purposefully made depiction did not lead to such a polarization; although there remained a direct causation. These findings support the evidence that conspiratorial predispositions are not associated with a confirmation bias about randomly occurring information (Dieguez et al., 2015), but contradict the assumption that conspiracy believers are more likely to attribute intentionality *per se* (Douglas et al., 2016) and tend to connect apparently unrelated events (Wood et al., 2012). One reason might be that most previous studies focused on existing conspiracy theories, which participants have prior knowledge of and might hold quite firm and elaborated beliefs about; whereas in our studies participants had to actively use information to draw an inference on whether any conspiracy is going on at all. This is supported by findings from Uscinski et al. (2016) who showed that an effect of conspiracy allegations concerning a supposed media bias was only present when the receivers were of a certain predisposition. Our research extends this finding and shows that conspiracy formation

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interacts with conspiratorial predispositions and the semantical cues of causation and intention.

### Conclusion

To our knowledge, these studies were the first approach towards empirically exploring the immediate formation of conspiracy beliefs in a real, ongoing world event: We grasped the opportunity presented by a highly relevant topic (FIFA World Cups and the involvement of governments) that had been in the arena of public interest for just a few hours and asked our participants just in time, before the conspiracy theories flooding the newspaper message boards became common knowledge. This is practically important because public events are almost always followed by discussions about the event's 'true nature', for example in online message boards. Our studies give hints about when and how the opinions of *conspiracy believers* and *conspiracy sceptics* become so divided: it happens when the initial belief about an event is formed, but it depends on specific semantic features of available information like causation and intention.

Yet, we see that the strength of our studies might also be their strongest weakness: we tested only one possible conspiracy construct out of many, and focused on the allegations of conspiracies within governments. Therefore, our findings will have to stand the test in a wider field of experiments in the future, using different content or fictional scenarios. Nevertheless, the insight that the judgments of *conspiracy believers* and *sceptics* about the event's 'true nature' were not *a priori* divided but needed to be triggered differently by the semantic linkage of information, can contribute one step further to a deeper understanding about conspiracy belief formation with regard to people's predispositions.

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### References

- Abalakina-Paap, M., Stephan, W. G., Craig, T., & Gregory, W. L. (1999). Beliefs in conspiracies. *Political Psychology, 20*(3), 637-647. doi: 10.1111/0162-895x.00160
- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Alicke, M. D. (2000). Culpable control and the psychology of blame. *Psychological Bulletin, 126*(4), 556-574. doi: 10.1037//0033-2909.126.4.556
- Alicke, M. D., & Rose, D. (2012). Culpable control and causal deviance. *Social and Personality Psychology Compass, 6*(10), 723-735. doi: 10.1111/j.1751-9004.2012.00459.x
- Barkun, M. (2013). *A culture of conspiracy: Apocalyptic visions in contemporary America* (Vol. 15). Berkeley: Univ of California Press.
- Bost, P. R., & Prunier, S. G. (2013). Rationality in conspiracy beliefs: the role of perceived motive. *Psychological Reports, 113*(1), 118-128. doi: 10.2466/17.04.PR0.113x17z0
- Brotherton, R., & French, C. C. (2014). Belief in conspiracy theories and susceptibility to the conjunction fallacy. *Applied Cognitive Psychology, 28*(2), 238-248. doi: 10.1002/acp.2995
- Brotherton, R., French, C. C., & Pickering, A. D. (2013). Measuring belief in conspiracy theories: the generic conspiracist beliefs scale. *Frontiers in Psychology, 4*. doi: 10.3389/fpsyg.2013.00279
- Clarke, S. (2002). Conspiracy theories and conspiracy theorizing. *Philosophy of the Social Sciences, 32*(2), 131-150. doi: 10.1177/004931032002001
- Costea, M. (2014). The Crimean Crisis, national identity and territorial integrity. Moscow's and Brussel's arguments in 2014. *Globalization and Intercultural Dialogue: Multidisciplinary Perspectives - Political Sciences, 330-338*.

## A.5 Conspiracy formation is in the detail

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- Dieguez, S., Wagner-Egger, P., & Gauvrit, N. (2015). Nothing happens by accident, or does it? A low prior for randomness does not explain belief in conspiracy theories. *Psychological Science*, 26, 1762–1770. doi: 10.1177/0956797615598740
- Douglas, K. M., Sutton, R. M., Callan, M. J., Dawtry, R. J., & Harvey, A. J. (2016). Someone is pulling the strings: hypersensitive agency detection and belief in conspiracy theories. *Thinking & Reasoning*, 22(1), 57-77. doi: 10.1080/13546783.2015.1051586
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G\*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175-191. doi: 10.3758/BF03193146
- Fenster, M. (1999). *Conspiracy Theories: Secrecy and Power in American Culture*. Minneapolis: University of Minnesota Press.
- Ganser, D. (2006). The 'strategy of tension' in the Cold War period. In R. D. Griffin & P. D. Scott (Eds.), *9/11 and American empire: Intellectuals speak out* (Vol. 1). Northampton, MA: Olive Branch Press.
- Heider, F. (1958). *The psychology of interpersonal relations*. New York: Wiley.
- Klayman, J., & Ha, Y.-W. (1987). Confirmation, disconfirmation, and information in hypothesis testing. *Psychological Review*, 94(2), 211-228. doi: 10.1037/0033-295X.94.2.211
- Kruglanski, A. W. (2004). *The psychology of closed mindedness*. New York: Taylor & Francis Books.
- Leman, P. J., & Cinnirella, M. (2013). Beliefs in conspiracy theories and the need for cognitive closure. *Frontiers in Psychology*, 4. doi: 10.3389/fpsyg.2013.00378
- Malle, B. F., Guglielmo, S., & Monroe, A. E. (2014). A theory of blame. *Psychological Inquiry*, 25(2), 147-186. doi: 10.1080/1047840X.2014.877340

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- Semantical cues and conspiracy formation 21
- Nickerson, R. S. (1998). Confirmation bias: A ubiquitous phenomenon in many guises. *Review of General Psychology, 2*(2), 175-220. doi: 10.1037/1089-2680.2.2.175
- Raab, M. H., Auer, N., Ortlieb, S. A., & Carbon, C. C. (2013). The Sarrazin effect: The presence of absurd statements in conspiracy theories makes canonical information less plausible. *Frontiers in Psychology, 4*. doi: 10.3389/fpsyg.2013.00453
- Schlenker, B. R., Britt, T. W., Pennington, J., Murphy, R., & Doherty, K. (1994). The triangle model of responsibility. *Psychological Review, 101*(4), 632-652. doi: 10.1037/0033-295X.101.4.632
- Swami, V., Chamorro-Premuzic, T., & Furnham, A. (2010). Unanswered questions: A preliminary investigation of personality and individual difference predictors of 9/11 conspiracist beliefs. *Applied Cognitive Psychology, 24*(6), 749-761. doi: 10.1002/acp.1583
- Swami, V., & Furnham, A. (2014). Political paranoia and conspiracy theories. In J.-P. Prooijen & P. A. M. van Lange (Eds.), *Power, Politics, and Paranoia: Why People are Suspicious about their Leaders* (pp. 218-236). Cambridge: Cambridge University Press.
- Times, N. Y. (1992). New York Times/CBS News state of the union poll, January 22-25 (unpublished report supplied by the Times survey department) [Press release]
- Uscinski, J. E., Klofstad, C., & Atkinson, M. D. (2016). What drives conspiratorial beliefs? The role of informational cues and predispositions. *Political Research Quarterly, 1*-15. doi: 10.1177/1065912915621621
- Warner, B. R., & Neville-Shepard, R. (2014). Echoes of a conspiracy: Birthers, truthers, and the cultivation of extremism. *Communication Quarterly, 62*(1), 1-17. doi: 10.1080/01463373.2013.822407
- Weiner, B. (1995). *Judgments of responsibility: A foundation for a theory of social conduct*. New York: Guilford Press.

## A.5 Conspiracy formation is in the detail

Semantical cues and conspiracy formation

22

Wood, M. J., Douglas, K. M., & Sutton, R. M. (2012). Dead and alive: Beliefs in contradictory conspiracy theories. *Social Psychological and Personality Science*, 3(6), 767-773. doi: 10.1177/1948550611434786

A.5 Conspiracy formation is in the detail

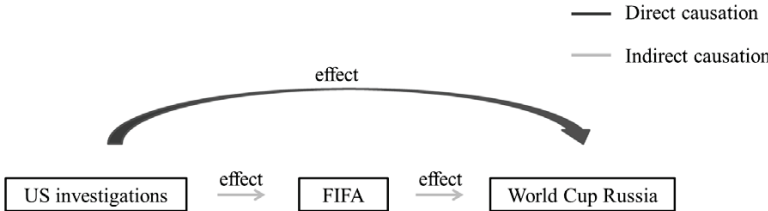


Figure 1. Showing the semantic linkage for direct and indirect causation regarding the effects of US investigations, FIFA and the World Cup in Russia in 2018.

A.5 Conspiracy formation is in the detail

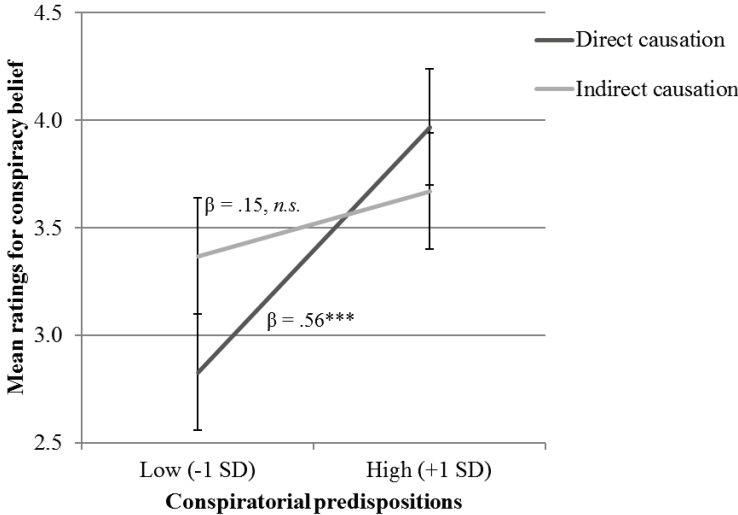
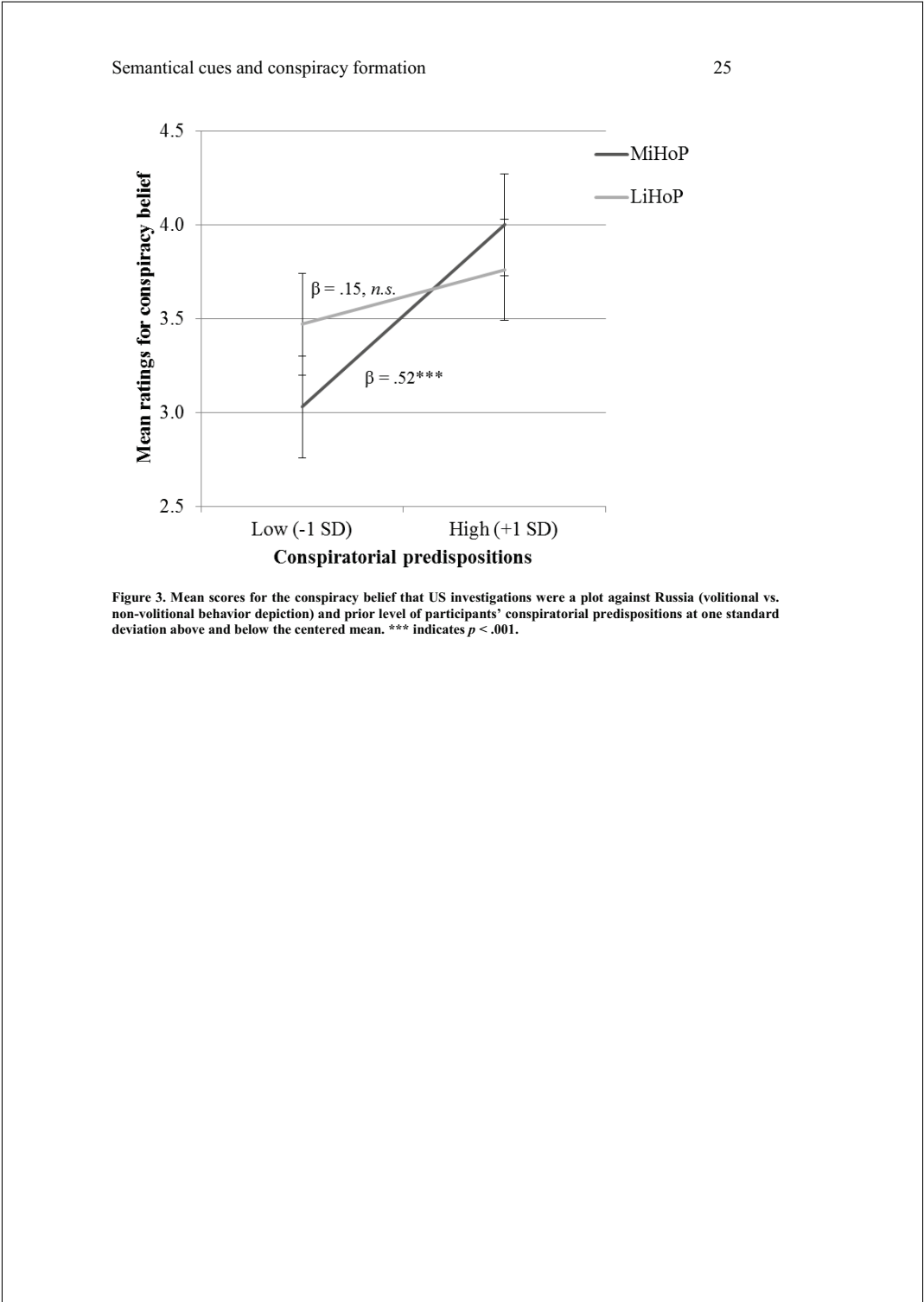


Figure 2: Mean scores for the conspiracy belief that US investigations were a plot against Russia (direct causation vs. indirect causation condition) and prior level of participants' conspiratorial predispositions at one standard deviation above and below the centered mean. \*\*\* indicates  $p < .001$ .



A.5 Conspiracy formation is in the detail



## A.6 In the beginning there was the conspiracy theory

Raab, M., Muth, C., and Carbon, C.C. (in prep.). *Am Anfang war die Verschwörungstheorie [In the beginning there was the conspiracy theory]*. Berlin: Springer

Excerpt from:

*Am Anfang war die Verschwörungstheorie [In the beginning there was the conspiracy theory]* (working title)

Genre: nonfiction; popular science

Authors: Marius Raab, Claudia Muth and Claus-Christian Carbon

Pages: ca. 160

Publisher: Springer Verlag Berlin

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[begin of excerpt]

1 **Die Philosophie oder: Die Pille der Vernunft**

2 *Die blaue oder die rote Kapsel?* Mit dieser Entscheidung bestimmt  
3 Neo, die Hauptfigur im Science-Fiction-Film *Matrix* (1999) der  
4 Wachowski-Geschwister, sein weiteres Schicksal. Vor die Wahl stellt  
5 ihn Morpheus, eine rätselhafte und charismatische Führerfigur, die  
6 Neo aus seinem Alltag reißt und in ein Haus mitten in der Großstadt  
7 bringt, das vielleicht um 1900 gebaut wurde – und in dem seit  
8 mehreren Jahrzehnten niemand mehr saubergemacht hat. Die Einrichtung  
9 des Zimmers: zwei große, mit rotem Leder bezogene Sessel, die  
10 genauso gut im Sigmund-Freud-Museum in Wien stehen könnten,  
11 dazwischen ein kleiner, hoher Holztisch mit einem Glas Wasser. Im  
12 Hintergrund der Szene ist ein aufgelassener Kamin, die Tapeten lösen  
13 sich von den Wänden, alles ist voller Staub.

14 Morpheus und Neo sitzen sich gegenüber, und Morpheus bietet mit  
15 ausgestreckten Armen zwei Pillen an – eine ist blau, die andere rot.  
16 Wenn Neo versucht, Morpheus in die Augen zu blicken, sieht er nur  
17 sich selbst in den verspiegelten Brillengläsern. In diesem Moment  
18 entscheidet Neo nicht nur seine eigene Zukunft. Ohne es zu wissen,  
19 oder auch nur zu ahnen, verändert er den Lauf der Dinge, der ganzen  
20 Menschheit. „Bedenke, alles was ich Dir anbiete, ist die Wahrheit;  
21 nicht mehr“, sagt Morpheus. Hätte Neo die blaue Pille gewählt, wäre  
22 er in seinem Bett aufgewacht und hätte weiter an das geglaubt, was  
23 er glauben wollte. Neo spürt aber seit Jahren, dass mit der  
24 Realität, wie er sie kennt, irgendetwas nicht stimmt. Aber was? Nach  
25 kurzem Zögern ergreift er die Chance, die eigentliche Realität  
26 kennen zu lernen, um hinter die Dinge zu sehen, auch wenn Morpheus`  
27 Versprechen in diesem Moment eher einem Rätsel denn einer klaren  
28 Ansage gleichkommt: „Schluckst du die rote Kapsel, bleibst Du im

## A.6 In the beginning there was the conspiracy theory

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29 Wunderland und ich führe dich in die tiefsten Tiefen des  
30 Kaninchenbaus!"

31 Der Film Matrix war ein Welterfolg. Seine Handlung ist eine der  
32 größten anzunehmenden Verschwörungen: Die Menschheit hat  
33 intelligente Computer und Roboter gebaut; es kam zum Streit, wer auf  
34 der Erde das Sagen hat, schließlich zum Krieg; die Roboter haben  
35 gewonnen, jeden Menschen in einen eigenen kleinen Wassertank  
36 gepackt, an Schläuche angeschlossen, und sein Zentralnervensystem  
37 mit einem gigantischen Computernetzwerk verkabelt--genannt wird das  
38 ganze System schlicht und einfach einschüchternd „Matrix“! Nichts  
39 was die Menschen wahrnehmen ist seitdem real, alle Sinneswahrnehmung  
40 wird erzeugt in einer einzigen gigantischen Illusion. Die Roboter  
41 benutzen indes die menschlichen Körper als Energie-Generatoren, so  
42 wie Ameisen sich um Blattläuse kümmern--sie werden vor Gefahren  
43 beschützt und werden im Gegenzug eben gemolken.

44 Nichts, aber auch gar nichts ist echt, alles ist nur inszeniert von  
45 einer bösen Macht, die ganze Existenz ein einziges Sklavendasein.  
46 Und noch schlimmer: man hat noch nicht einmal eine Ahnung davon.  
47 Noch umfassender, noch unmenschlicher und hinterhältiger kann eine  
48 Verschwörung nicht sein. Selbst das totale Überwachungsszenario aus  
49 1984 nimmt sich dagegen bescheiden aus. Neo, der sich im Film als  
50 *der Auserwählte* herausstellt und übermenschliche psychische Kräfte  
51 hat, spürte vor der Begegnung mit Morpheus in seinem Matrix-Dasein  
52 nur ein leichtes Unbehagen über die Welt um ihn herum. Wie ein  
53 Verschwörungstheoretiker hat er nach Hinweisen gesucht, Spuren  
54 gesammelt, meistens aber ein zurückgezogenes Leben vor seinem  
55 Computer geführt. Seine dominante Charaktereigenschaft war eine  
56 Mischung aus Gleichgültigkeit gegenüber dem Leben und einer  
57 Verachtung für alle Menschen seiner Umwelt. Morpheus hat Neo den  
58 Ausweg ermöglicht: aus einer belanglosen, zynischen Existenz.

59 Die Matrix verhandelt bis zur letzten Konsequenz die Grundfragen  
60 jeder Verschwörungstheorie: Wie viel ist real an der Realität? Was  
61 ist nur Scharade, die von mächtigen Kräften in Szene gesetzt wird,  
62 um uns in Sicherheit zu wiegen? Und vor allem: Können wir Wahrheit  
63 und Verschwörung unterscheiden--die Frage betrifft sowohl spezifische  
64 Fälle als auch die philosophische Frage ob es „eine“ Wahrheit gibt?

[end of excerpt]

## Publications

- Gebauer, F., Raab, M.H., & Carbon, C.C. (2016). Back to the USSR: How colors might shape the political perception of East vs. West. Manuscript submitted for peer-review.
- Gebauer, F., Raab, M.H., & Carbon, C.C. (2016). Conspiracy formation is in the detail: on the interaction of conspiratorial predispositions and semantical cues. Manuscript under revision.
- Gebauer, F., Raab, M.H., & Carbon, C.C. (2016). Imagine all the forces: The impact of threatening news coverage on the willingness to militarily engage in the resurgence of the East vs. West conflict. *Journal of Media Psychology Theories Methods and Applications*. Advance online publication. doi: 10.1027/1864-1105/a000180
- Muth, C., Raab, M.H., & Carbon, C.C. (2016). Semantic stability is more pleasurable in unstable episodic contexts. On the relevance of perceptual challenge in art appreciation. *Frontiers in Human Neuroscience*, 10(43). doi: 10.3389/fnhum.2016.00043
- Weth, K., Raab, M.H., & Carbon, C.C. (2016). Investigating emotional responses to self-selected sad music via self-report and automated facial analysis. *Musicae Scientiae*, 19(4), 412-432. doi: 10.1177/1029864915606796
- Muth, C., Raab, M.H., & Carbon, C.C. (2015). The stream of experience when watching artistic movies. Dynamic aesthetic effects revealed by the continuous evaluation procedure (CEP). *Frontiers in Psychology – Cognitive Science*, 6:365. doi: 10.3389/fpsyg.2015.00365
- Raab, M. H., Muth, C., & Carbon, C. C. (2013). M5oX: Methoden zur multidimensionalen und dynamischen Erfassung des Nutzererlebens. In S. Boll-Westermann, S. Maaß & R. Malaka (Hrsg.), *Workshopband Mensch & Computer 2013*, 155-164. München: Oldenburg Verlag.
- Raab, M. H., Auer, N., Ortlieb, S., & Carbon, C. C. (2013). The Sarrazin effect: the presence of absurd statements in conspiracy theories makes canonical information less plausible. *Frontiers in Personality Science and Individual Differences*, 4. doi: 10.3389/fpsyg.2013.00453
- Raab, M. H., Ortlieb, S., Guthmann, K., Auer, N., & Carbon, C. C. (2013). Thirty shades of truth: Conspiracy theories as stories of individuation, not of pathological delusion. *Frontiers in Personality Science and Individual Differences*, 4. doi: 10.3389/fpsyg.2013.00406
- Schmid, U., Siebers, M., Folger, J., Schineller, S., Seuß, D., Raab, M., Carbon, C. C., & Faerber, S. (2013). Cognitive Model For Predicting Aesthetical Judgements As Similarity to Dynamic Prototypes. *Cognitive Systems Research*, 24, 72-79.
- Schmid, U., Siebers, M., Carbon, C. C., Raab, M., Rüsseler, J., Gross, T., Schlieder, C., & Dörner, D. (Hrsg.) (2012). *Proceedings of the 11th Biannual Conference of the German Cognitive Science Society - KogWis 2012*. Bamberg: University of Bamberg Press.
- Raab, M., Wernsdorfer, M., Kitzelmann, E., & Schmid, U. (2011). From Sensorimotor Maps to Rules: An Agent Learns from a Stream of Experience. *Lecture Notes in Computer Science*, 6830, 333-339.

## Conference contributions

- Raab, M.H., Gebauer, F., Kammerl, B., & Carbon, C.C. (2015). Personal Belief and Conspiracy Belief. *World Psychological Forum - Crossroads of Interdisciplinarity*, Prague, CZ
- Gebauer, F. Raab, M.H., Brandenstein, N. & Carbon, C.C. (2015). Imagine all the forces: The impact of threatening news coverage on the willingness for first-step military action in the Ukraine Crisis. *World Psychological Forum - Crossroads of Interdisciplinarity*, Prague, CZ
- Gebauer, F. Raab, M.H., Brandenstein, N. & Carbon, C.C. (2015). Bellicistic press coverage and the willingness to initiate first-step military actions in the resurgence of the East vs. West conflict. *9<sup>th</sup> Conference of the Media Psychology Division*, Tübingen, Germany
- Raab, M. H., Ortlieb, S.A., Gebauer, F., Ettner, J., & Carbon, C.C. (2015). Vita brevis, kitsch longae—When death was salient, kitsch appears less kitschy *Perception*, 44(Suppl.)
- Raab, M. H., Muth, C., & Carbon, C. C. (2015). The aesthetic value of multi—modal semantic gaps. *VSAC 2015 Book of Abstracts*, 3<sup>rd</sup> Visual Science of Art Conference, Liverpool
- Muth, C., Raab, M. H., & Carbon, C. C. (2015). On the relationship between determinacy and art appreciation across different episodic contexts. *VSAC 2015 Book of Abstracts*, 3<sup>rd</sup> Visual Science of Art Conference, Liverpool
- Raab, M. H., Muth, C., & Carbon, C. C. (2014). Pleasure by irritation: lessons from artworks and illusions on the active creation of meaning. In *VSAC 2014 Book of Abstracts*, 2<sup>nd</sup> Visual Science of Art Conference (S. 28), Belgrade.
- Raab, M. H., Muth, C., & Carbon, C. C. (2014). Expecting the unexpected: Art gallery visitors judge ambiguous artistic film material as less indeterminate and more pleasurable. In *VSAC 2014 Book of Abstracts*, 2<sup>nd</sup> Visual Science of Art Conference (S. 36-37), Belgrade.
- Raab, M. H., Muth, C., & Carbon, C. C. (2014). What can the pupil size tell us about aesthetics? Towards a multidimensional model of complex continuous experience. *Perception*, 43(Suppl.), 159.
- Muth, C., Raab, M. H., & Carbon, C. C. (2014). The dynamics of 'Aesthetic Aha': Insightful moments during the elaboration of artistic movies increase appreciation. In *VSAC 2014 Book of Abstracts*, 2<sup>nd</sup> Visual Science of Art Conference (S. 20), Belgrade.
- Muth, C., Raab, M. H., & Carbon, C. C. (2014). Stream along the aesthetic mind. The dynamics of elaborating artistic movies. *Perception*, 43(Suppl.), 10.
- Albrecht, S., Raab, M. H., & Carbon, C. C. (2014). Amplification effects of processing fluency on implicit affective evaluation. *Perception*, 43(Suppl.), 154.
- Harsanyi, G., Raab, M.H., Hesslinger, V., Düclos, D., Zink, J., & Carbon, C.C. (2013). Osama bin Laden is still alive – An implicit profile of disfavor against faces with stereotypical Muslim attributes. Abstracts of the 55th Conference of Experimental Psychologists. Lengerich: Pabst Science Publishers.
- Raab, M., Hesslinger, V. M., Muth, C., & Enz, S. (2012). Motion and Emotion: Using Kinect to Force Ideomotor Empathy. In U. Schmid, M. Siebers, C. C. Carbon, M. Raab, J. Rüsseler, T. Gross, C. Schlieder, & D. Dörner (Hrsg.), *Proceedings of the 11th Biannual Conference of the German Cognitive Science Society - KogWis 2012* (S. 98-99). Bamberg: University of Bamberg Press.

- Raab, M., Shengelia, N., & Carbon, C. C. (2012). Back to the Roots: Measuring Motoric Correlates of Ur-Emotions. In U. Schmid, M. Siebers, C. C. Carbon, M. Raab, J. Rüsseler, T. Gross, C. Schlieder, & D. Dörner (Hrsg.), *Proceedings of the 11th Biannual Conference of the German Cognitive Science Society - KogWis 2012* (S. 141-142). Bamberg: University of Bamberg Press.
- Imhof, M., Raab, M., & Carbon, C. C. (2012). PsiCasso: Simulating the Dynamics of Aesthetic Appreciation. In U. Schmid, M. Siebers, C. C. Carbon, M. Raab, J. Rüsseler, T. Gross, C. Schlieder, & D. Dörner (Hrsg.), *Proceedings of the 11th Biannual Conference of the German Cognitive Science Society - KogWis 2012* (S. 129-131). Bamberg: University of Bamberg Press.
- Jakesch, M., Ortlieb, S., Raab, M., & Carbon, C. C. (2012). Size Matters! How Value Organizes Our Perception of Art. In U. Schmid, M. Siebers, C. C. Carbon, M. Raab, J. Rüsseler, T. Gross, C. Schlieder, & D. Dörner (Hrsg.), *Proceedings of the 11th Biannual Conference of the German Cognitive Science Society - KogWis 2012* (S. 88-89). Bamberg: University of Bamberg Press.
- Raab, M., Shengelia, N., & Carbon, C. C. (2012). Towards an emotional footprint: Non-verbal analysis of emotionally processed visual stimuli via posturography. *Perception, 41(Suppl.)*, 96.
- Harsanyi, G., Raab, M., Hesslinger, V. M., Düclos, D., Zink, J., & Carbon, C. C. (2012). The face of terrorism: Stereotypical Muslim facial attributes evoke implicit perception of threat. *Perception, 41(Suppl.)*, 111.
- Schmid, U., Siebers, M., Folger, J., Schineller, S., Seuß, D., Raab, M., Carbon, C. C., & Faerber, S. (2012). A Cognitive Model for Predicting Aesthetical Judgements as Similarity to Dynamic Prototypes. In N. Rußwinkel, U. Drewitz, & H. van Rijn (Hrsg.), *Proceedings of the 11th International Conference on Cognitive Modeling* (S. 13-18). Berlin: Universitätsverlag der TU Berlin.
- Schmid, U., Grossmann, P., Wachter, M., Raab, M., Carbon, C. C., & Faerber, S. J. (2011). How visible are different variations of spatial features and relations in logos and how does visibility affect prototype generation? In A. Henrich, C. Schlieder, & U. Schmid (Hrsg.), *Visibility in Information Spaces and in Geographic Environments: Post-Proceedings of the KI'11 Workshop* (S. 23-34). Bamberg: University of Bamberg Press.
- Raab, M., Imhof, M., & Carbon, C. C. (2011). Eyes for an agent: Simulation of dynamically evolving preferences for visual stimuli by a neural network and a multiple-trace memory model. *Perception, 40(Suppl.)*, 205.
- Rockelmann, L., Zimmermann, R., Raab, M., & Carbon, C.C. (2011). How you look at art: Analyzing beholder's movement pattern by radio-based identification. *Perception, 40(Suppl.)*, 222.
- Raab, M., & Carbon, C. C. (2010). Objective measures for complexity and curvature in visual objects and scenes. *Perception, 39 (Suppl.)*, 114-115.
- Raab, M. & Wernsdorfer, M. (2010). Heidi, James & Igor. Inductive Rule Acquisition for a Philosophically and Psychologically Founded Autonomous Agent. In J. Haack, H. Wiese, A. Abraham, & C. Chiarcos (Hrsg.), *Proceedings of KogWis 2010. 10th Biannual Meeting of the German Society for Cognitive Science* (S. 161). Potsdam: Universitätsverlag Potsdam.