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Algorithmic Absolution: The Case of Catholic Confessional Apps

Sasha A.Q. Scott

Abstract

This article explores the Catholic ritual of confession as practiced through the use of mobile apps. Confession is a surprisingly persistent social form and in this article I begin by contextualising the relationship between society, confession and technology before presenting a case study of Catholic confessional apps that covers their design, marketing, and user feedback from review forums. This throws up a series of important questions about how we understand religious authenticity and authority in practices of faith that have a computational agent taking moral deviations as ‘data input’. How should we conceptualise these applications when an algorithm imparts absolution, when penance is assigned by computational code? Observing that most people do not question the automation of the confessional ritual and that users feel their use of confessional apps as entirely legitimate forms of religious practice, I argue that questions of authenticity are secondary to those of authority. In the traditional Sacrament of Penance a priest, acting in persona Christi as the minister of Christ’s mercy and drawing upon canonical law, recites the Rites of Penance, thereby performing the transition from the state of ‘penitent’ to ‘absolved’. The replacement of a priest with the silent logics of algorithmic automation has profound implications for the authoritative power of confession as a transformative ritual.

Keywords

Online ritual, mobile apps, confession, algorithm, authority, authenticity, digital religion, ethics

1 Introduction

When *Confession: A Roman Catholic App* was first launched in 2011 it elicited a mixture of sarcasm and sneering from the press, with the New York Times' Maureen Down penning a Lords Prayer for the digital age (Our Father, who art in pixels...) and concluding that 'nothing is sacred anymore, not even the sacred'. Marketed as an 'aid for every penitent...[through] a personalised examination of conscience', the user of 'Confession' sets up a password protected account and proceeds to list their sins in accordance with the ten commandments. The user is invited to confess and declare contrition, whereafter the screen shows the receipt of absolution and displays with a prayer for further reflection. Despite being widely derided as inauthentic (see Sacasas 2011 for a review of media coverage), the app nevertheless remains popular across a growing number of platforms. Similar applications have proliferated with the same structural format: progressive stages of sorrow, confession, absolution and penance followed in the traditional rites. Combined, they have been downloaded hundreds of thousands of times. *Confession: A Roman Catholic App* even carries an imprimatur from Bishop Kevin Rhoades of Fort Wayne-South Bend, a first of its kind. In stark contrast to the mainstream press there has been a huge amount of support for them through online Christian communities (see Mattingley 2011, Rey 2014). Additionally, these apps sit within a larger body of confessional platforms whereby users admit to moral deviations with varying degrees of publicity and anonymity.

This article is concerned with understanding how the use of confessional Apps constitutes part of an increasingly diverse range of religious practices that often fall outside traditional thinking. In terms of the confessional, I want to talk about how the rituals performed with these apps are felt to be authentic (if they are), and how we should conceptualise them when an algorithm imparts absolution, when penance is assigned by computational code. The subject of mobile applications is still very new, and it is only now that studies are beginning to appear. At the heart of any computational artefact is an algorithm: a set of mathematical procedures for transforming input data into output data. It sounds innocuous, yet algorithms are a key governing logic in society with 'the power to enable and assign meaningfulness' (Langlois 2013). In his prescient article on the social implications of algorithms Tarleton Gillespie begins to unpack the complex dimensions of algorithmic relevance, arguing that we need to pay 'close attention to where and in what ways the introduction of algorithms into human knowledge practices may have political ramifications' (2013, p168). Whilst theorists like David Berry (2011) and Ted Shripas (2015) have begun to explore the phenomenology of algorithms, there is much work to be done on in terms of case studies and contextual accounts. Totaro and Ninno (2014) go as far as arguing that the algorithm is an essential 'interpretive key' of modernity. The case of confessional apps has a particular veracity because of the significance of the human agent the algorithm is replacing: the Catholic priest.

The question of confessional apps reveals a series of wider issues about the relationship between religion, digital media and culture as reflected in a rich and growing body of literature (Campbell 2005, 2012, Connelly 2012, Lundby 2012, Helland 2013). Religious practices have been shown as relevant and authentic across a number of social media platforms, from Twitter (Cheong 2012b), Facebook (Abrahms et al 2013, Miller et al 2013), Second Life (Grieve 2011) and YouTube (Hirschkind 2012, Warner 2013, Scott 2015, 2016). My approach is at times contrary to Hjarvard's (2008) influential paper on the mediatisation of religion, which argues that religion is being 'subsumed' by the logics of media in terms of regulation, symbolic content and individual practice. Instead I argue that these are not substitutions but adaptations and renegotiations: of traditions, authenticity, authority and meaning. Confession – like all ritual – is dependent on the perception of authenticity, and if users report these practices as authentic then that should, quite simply, be enough. In this article I make the case for moving beyond questioning the *legitimacy* of digital religion and instead explore the implications of having a computational agent at the centre of personal religious practice.

I begin by reviewing the role of confession in society, and why it has such resonance in wider debates between technology and religion. Confession is a surprisingly persistent form, and remains part of our media landscape. I then turn to the particulars of the formal confessional apps, looking at how they function and what form they take. My thinking moves between two parallel trajectories. The first is concerned with human perception: how is the app (and by proxy the algorithm) understood by users? How, if at all, does computational agency factor into how the app is used, how it is perceived, and how it is incorporated into everyday religious practice by users. I draw upon user discussions on review sites to see how users self-report their experience of the app. I observe that for most the computational is not even considered an issue: it is very rarely questioned and most users only talk negatively when discussing technical problems (as opposed to ethical ones). The second line of thinking considers how we should conceptualise the algorithm in terms of the role it plays in this most intriguing of contexts.

2 Confession: A short social history

Confession has played an important role in the history of all societies and major religions in some form or another. In Buddhism, the monastic confession of wrongdoings to elders is mandatory, and the sutras of the Pali Canon recount Buddha himself hearing confessions of the Bhikkhus. In Judaism the Ashamnu confession makes up part of the daily supplications in which sins are confessed communally and in the plural ("We have incurred guilt, we have betrayed...");

confession for sins against a fellow man involves confession to the victim as a requirement before forgiveness can be received from God. In Islam, seeking forgiveness from God (Istighfar) is an essential aspect of everyday worship, invoked through the repetition of the Arabic *astaghfirullah* ('I seek forgiveness from Allah'). Confession is in all the Christian traditions, in various forms. Indeed, the Lord's Prayer, common to all branches of the faith, was taught by Jesus to the Disciples according to the New Testament (Gospel of Mathew 6:5-13, Gospel of Luke 11:1-4), and contains the request for the forgiveness of sins. Yet no religious confession is so rich as the Roman Catholic tradition. Known as penance or reconciliation, confession is seen as an essential and fundamental part of the Catholic faith and is understood as performing a reconciliation of the soul with the grace of God. The Catholic Church refers to James 5:16, "confess your sins to one another" and to Jesus addressing the Apostles thus: "Whose sins you forgive are forgiven them, and whose sins you retain are retained" (John 20:23) when explaining the biblical basis for the sacrament. Catholic confession has moved between the private and public confessional throughout history. In mediaeval Catholicism, sins were confessed openly as something 'done' during service, rather than a private communication with God alone. It was only after the counter-reformation that the sacrament of penance moved from the social to the personal and became the private conversation between priest and confessor as we generally know it today. But the confession of sin, whether in front of a priest or congregation (in the loosest term), has always involved a complex yet vital bridge between a real and an imagined audience. A priest constitutes the smallest of all possible audiences, but they serve as conduit to the whole church, a heavenly public, and to God himself.

The Reverend Robert Barron (2011) argues – somewhat hopefully – that when lacking a proper *ecclesiastical* outlet for dealing with sin we will search in desperation for alternatives. It is certainly true that we see alternative forms of confession throughout society, but I believe this reflects a more basic social role for confession than any lack of religious institutional options. Instead, I would suggest the rather more prosaic answer lies somewhere between an individual motivation for acceptance, acknowledgement and validation, and our public desire for the voyeuristic consumption of the 'authentic' (Wilson 2007). Media researchers are now familiar with the phenomenon of self-disclosure, exposure and the blurring of private and public affairs in the mass media. Bill Clinton's confession to 'intimate relations' with Monika Lewinski followed the formula of a classical degradation ritual and was a natural precursor to talk shows such as Oprah, Jerry Springer and Jeremy Kyle whereby we witness the ritualistic admission of sins before an audience. The closely related shows of Judge Judy, Judge Faith and others additionally include participants being administered some form of punishment for their indiscretions. On the same continuum we find the talent shows of American Idol and The X Factor in which the admonishment of poor or inadequate behaviour is an integral aspect of our entertainment, whilst reality TV has long incorporated the video diary as a key narrative tool that valorises the confessional 'journey' of

contestants (Biressi and Nunn 2012). In common is the provision of a public platform in which to articulate one's sins for *judgement*. These phenomena all betray a search for absolution through the inclusion into some kind of 'moral community', however loose or ill defined. As Michel Foucault explains:

We have singularly become a confessing society. The confession has spread its effects far and wide... One confesses ones crimes, one's sins one's thoughts and desires, ones illnesses and troubles; ...One confesses in public and in private, to one's parents, one's educators, one's doctor, to those one loves; one admits to oneself in pleasure and in pain...Western man has become a confessing animal. (1978, p. 59)

Parallel to the confessional format of talk shows and reality television, digital technology has given rise to new forms of anonymous confession. The site Postsecret invites the public to send in a secret that 'is true and has never been heard' (PostSecret 2016), has now been running for 12 years and has a cult like following with hundreds of thousands of submissions from across the world. The YouTube confessional is an established phenomenon whereby video diaries contain the disclosure of intimate secrets. Twitter has given rise to many enduring confessional hashtags such as #confession, #Iwishiwas and #wheniwas13, and in many ways blogs are the original online confessional, as argued by Brock (2013). And as web access is increasingly made through mobile devices and less via a search engine or internet browser there has been a proliferation of confessional apps, such as Secret, YikYak, Whisper and Let's Confess. Whilst by no means all of our digital modes of communication are confessional it does seem that they flourish in the new media economy. As Poletti (2011) explains through her analysis of PostSecret, it is the simple possession of a secret that connects us. By acknowledging and sharing in the *status* of having a secret – i.e. a transgression, a sin – we place ourselves as complicit in an emotional fantasy of reciprocity and belonging. Most of these platforms contain a 'community' aspect: secrets are for sharing, otherwise the catharsis of externalising them is absent. The YouTube confessional is directed to and consumed by a vast and unimaginable audience; PostSecret is visited by hundreds of thousands of visitors each month; Twitter hashtags are the essence of connecting to a discursive body and define inclusion; secular confessional apps publicise, socialise and commodify your discretions by making them into entertainment for others. So whilst a meaningful sense of 'forgiveness' or 'absolution' as traditionally understood is lost, these platforms provide a cathartic release of guilt that is replaced with feelings of belonging, acceptance, and community (Toy 2015).

Importantly, all these different confessional forms – traditional or modern, religious or secular, public or private – maintain an authority figure. They are often symbolic and/or ceremonial, playing the role 'on behalf of' those who they represent: God, the public, the judiciary etc. But they are there, and they are central to the functioning legitimacy of the ritual and any absolution that may

follow. We must therefore conclude *a confession must be witnessed*. As Marshall (1998) observes, confession undeniably demands an audience. It is not necessary to entirely reconcile the Sacrament of Penance, Jerry Springer and #confession, but it is important to acknowledge they occupy the same conceptual space. Responses to our sins are either crafted through years of knowledge of scripture or the whimsical offerings of a social network. Yet they all contain a symbolic human agent acting in judgement of sin. As we will now discuss, Catholic confessional apps substitute this human agent with computer code, and I argue that this makes them a fundamentally different phenomenon, particularly in respect of moral authority.

3 Catholic Confessional Apps: Mapping the field

The most famous of these apps is *Confession: A Roman Catholic App*. It was developed by Little iApps and released for iPhone, iPad and later Android devices in 2011; *The Confession App* was developed by Web4U, and claims to prepare you ‘in a gentle and comforting way for the Catholic Sacrament of Confession’; *Reconciled With God: Catholic Confession* follows the same formula. Developed by Sunil Thomas it suggests that preparing well is the secret to confession. *Mea Culpa*, *iConfess – Confession Handbook and Guide*, *ConfessionAL* and *ConfessIt* all fall into the same category. All these apps follow the same basic structure with variations in details and architecture. In order to map the field we carried out a thematic analysis on the descriptions used by developers and on the review comments left by users on Google Play and the iTunes store, accessed between the 5/11/15 and the 12/11/16 for all the apps listed above, aggregating the comments across different apps. This methodological decision was made because we were not concerned with the differences between each app, but rather the perception and everyday practice of confessional apps as a genre. Not all the apps had review comments across both stores, but in total the dataset consisted of 311 comments across all the platforms. Between them these apps have well over a quarter of a million downloads.



Figure 1: Catholic Confession App logos. Left to right: *Confession: A Roman Catholic App*, *iConfess*, *Mea Culpa*, *ConfessIt*, *The Confession App*.

3.1 Marketing

It is important to acknowledge that these apps are not sold or marketed to replace the sacrament of confession. They are sold as aids, as trackers, as helpful guides that are interwoven with tradition and, where possible, institutional authority. *Mea Culpa* declares unambiguously “It is NOT a suitable replacement for the sacrament of confession. You CAN NOT use it to confess via the internet or over the phone.” (AppCrawler 2015), and *Confession* says it is “an aid for every penitent” (Little I Apps 2011). As Cheong and Ess (2012) point out, this highlights how this type of technology seeks to compliment and amplify traditional religious practices rather than replace. We are also told they can be used for the general examination of conscience, and do not only need to be part of the strict ritual of Sacrament of Penance. *The Confession App* suggests it can be used ‘by anyone of any group’ (Web4u, 2015), but it is highly unlikely that it would have any appeal to those outside the Catholic faith.

3.2 Design

In terms of design and user experience they all follow the same basic format of three stages: The first is an examination of conscience. This entails cataloguing sins in a thorough way. Most apps work on a simple Ten Commandments format, with each commandment leading to a sub-menu in which potential sins related to the commandments are listed and can be activated with finger-tap. The lists are extensive but not exhaustive, and most have the option of adding additional sins that either fall out of the rubric listed or have personal significance. The second aspect consists of a step-by-step guide of what to do inside the confessional. They list instructions and highlight script to be spoken aloud. This aspect is informed by the first: the script will be tailored to the list of sins you have catalogued in preparation, so there is no moving between screens or menus. This moves through the Act of Contrition and into Absolution. The last stage includes a space in which to record any acts of penance given by the priest. Beyond this broad structure the apps have a variety of other features. *iConfess* has an extensive collection of readings on confession, *ConfessionAL* includes a Biblical word game called ‘Heavenly Hangman’, which as strange as it seems is exactly what it describes. *Confession* has a library of prayers, both for Contrition and more traditional ones such as the Apostles’ Creed, Hail Mary and The Lords Prayer. *The Confession App* has fewer ‘extra’ features but contains an extensive guide to confession and how to use the app, including the menus ‘A brief history of confession’ and ‘do I need a priest?’ It is a reminder that these are still commercial products and each must compete in an increasingly crowded marketplace.

3.3 User feedback

Users report the apps almost universally in a positive light. The reviews reflect the diverse and highly personalised ways in which people incorporate the apps into the practice of their faith. This genre of apps is largely used as a memory aid, bringing focus and clarity to the ritual. As a result users report a reduction in anxiety that is often associated with the fear of forgetting one's sins whilst in the confessional with a priest, as Daniel Williams (2015) explains: "Now I'm focused on my confession more and less on saying things incorrectly". Users also report satisfaction at keeping an accurate, cumulative record of sins. A common theme in the reviews is the broad appeal that these apps have. They are declared as useful for new converts to the faith and those that have been active Catholics for many years; to the young because of their familiarity with the technology and to the old for a new form of engagement with faith; for the lapsed Catholic it is a very accessible way to re-connect with Confession and for the regular participant it is an easy tool to incorporate into the everyday. Where negative feedback is left it usually concerns technical issues such as the app being unstable, losing records or being incompatible with certain operating systems. Users often suggest improvements but these tend to be framed constructively. The most common suggestion is the inclusion of more reference text such as the Beatitudes or the Seven Deadly Sins. Occasional users comment that they do not feel entirely at ease using the phone in the confessional itself, but still reporting positive feedback from simply examining the conscience as part of everyday routine.

What is quite striking is when the developers are singled out for specific praise, which is observed quite regularly. Robert Sunderlin (2014) comments "Praise be to God the father almighty, his son our Lord, and the Holy spirit, that there are those who are using their technological talents to participate in grace"; Anne M (2015) exclaims "God Bless the developers of this app". The apps clearly have a great emotional importance to these users. In addition, it reflects an ease with which the technology is adopted. An explicit thanks to the developers shows they are aware of the conceptual location of these tools: they are not categorised alongside sacred texts but rather as *tools with which to practice faith*, as exemplified in comments by Sarah Farrier (2013) "A very gently and comforting piece of technology, you can use it on the go in your busy life".

Rachel Wagner (2013) has produced a six-class taxonomy of religious apps: *Prayer, Ritual, Sacred Text, Religious Social Media, Self-Expression* and *Focusing/Meditation*. As with so much religious practice, it is difficult to separate the wide range of observed behaviour concerning confessional apps into distinct singular classes. All the confessional apps qualify as ritual, yet they also refer to sacred texts throughout, they involve prayer, and they serve as focusing and meditative tools, as reported in the user feedback. So whilst it is certainly helpful to review the field, this type of taxonomy might serve to oversimplify the more interesting questions we could be asking. I am reminded of Christine Hine's (2015) important ethnographic work on internet and technology use

that she terms the E³ Internet: embedded, embodied, and everyday. The way in which people use these applications cannot be separated out as neatly as we might hope for the purpose of study. We must take a much more nuanced approach if we are to understand how they function in the practice of faith. These apps are not just technological constructs; they are shaped by the needs and desires of individual users.

4 Authenticity and Authority

Authenticity is a nebulous subject, but it has been the focus of much debate concerning media and religion (Hill-Smith 2009, Heidebrink et al 2011, Lundby 2011). In the context of religious practice, authenticity has two meanings that we must account for here: first, authenticity is a category through which to judge whether or not certain ‘objects’ are a legitimate part of a religious system. These can be symbols, beliefs, locations, rituals, etc. Secondly, it is a category with which to judge the participants in religious activity (Radde-Antweiler 2013). In other words, is the *system* authentic, and is the *experience* authentic? The second of these questions is relatively simple to address. The data is clear; users report an authentic experience over and over again. As with any ritual, the prescriptive validity stems from participation itself. The efficacy of ritual is found in its ability to energise the participants, produce an emotional energy, and increase focus on the shared action or object (confession), thereby intensifying the connection of the participants on the wider symbolic significance. The idea that this much be done synchronously and whilst copresent (as argued by Collins, 2004) is not only out-dated considering the latest thinking on technology and ritual, but does not even hold up when interrogated in terms of traditional ritual. In Hindu worship the presence of others is largely unimportant for daily rituals (Gupta 2002, quoted in Scheifinger 2012, p 121). In respect of Confession, the wider catholic community does not need to be present for sacrament; it is just the individual and the priest. But the ritual is deemed authentic because the wider catholic community knows intimately the intention and the content of the ritual, and this is why it has such enduring significance.

Authenticity is also bestowed upon these apps through the wider Catholic community. As mentioned, *Confession* was developed in consultation with two Catholic priests, Fr. Thomas Weinandy, OFM, the Exec. Director of the Secretariate for Doctrine and Pastoral Practices for the USCCB and Fr. Dan Scheidt, pastor of Queen of Peace Catholic Church in Mishawaka, Indiana, an official at the US conference of Bishops. In addition, Bishop Kevin C. Rhoades of the Diocese of Fort Wayne gave the app an official blessing, and bestowing the app with an imprimatur, making it the first of its kind. An imprimatur is itself a mark of authenticity, being an official declaration that

the text is free from moral or doctrinal error. This follows the agenda set out in Pope Benedict XVI's message in the 2010 World Communications Address in which he called upon the Catholic church to embrace digital technologies:

Using new communication technologies, priests can introduce people to the life of the Church and help our contemporaries to discover the face of Christ. They will best achieve this aim if they learn, from the time of their formation, how to use these technologies in a competent and appropriate way, shaped by sound theological insights and reflecting a strong priestly spirituality grounded in constant dialogue with the Lord.

On its first launch, the app appeared to gain support from the Vatican through Frederico Lombardi, director of the Holy Sea press office. However, due to some controversy in the media he later qualified his position, stating “It is essential to understand well the sacrament of penitence requires the personal dialogue between the penitent and the confessor and the absolution by the confessor... This cannot in any way be replaced by a technology application... One cannot talk in any way about a ‘confession via iPhone’,” (quoted in Mesia and Gilgoff 2011). However, this is exactly what users are reporting themselves as doing. It would seem that the legitimacy bestowed by official endorsement is important in user adoption of these platforms, but has less impact of how they then use them in their own personalised practices. Users create their own authentication strategies; they have different ways of explaining, justifying, and integrating the app into daily life and worship. Each must find their own way to navigate the sometimes brutal juxtaposition between technology and the ancient rituals of confession, in a process Heidebrink (2007) calls “individual rituality”. It is important to remember that whilst confession may require an uncomfortable engagement with one’s faults, it is essentially a healing process which when completed leaves the confessor absolved of sin and the threat of punishment removed. Authenticity is also linked to legitimate and consistent manifestations of sacred symbols. As such, users are not shy in reporting misquotes, errors and typos, and with an indignant gusto. This is because such indiscretion is a pollution of the sacred, and reflects how highly they are considered.

So it seems that questions of authenticity based simply on technology are problematic because they are grounded in out-dated notions. Discussions of the merits of the *real* vs. the *virtual* now sound positively arcane. Turkle’s (1995) argument that the virtual is ‘mere simulation’ simply does not hold true. Users report meaningful results, both practical and emotional. Even Heidi Campbell’s seminal essay on ‘Spiritualising the Internet’ (2005) needs realigning in this context: these are not ‘places’ we ‘go’ online. They do not have an *http://* or *www* prefix. They are embedded in our mobile devices, developed to be personal aids for personal practices. They do not engender ‘community’ in the very literal (and rather narrow) sense that social media does. Instead, ‘connection’ to a community is abstract and conceptual. It is a ‘felt’ inclusion in a community of

thought, belief and morality that is important, in contrast to the performative accumulation of ‘likes’ or ‘retweets’ driving the affective cycle of immediacy and visibility on the most popular social platforms. As Campbell argues, religious users of technology are guided by a different set of choices to secular users. It is less about desires and needs, and rather spiritual meanings and values that take precedence. We must be careful not to overgeneralise, but it is an important point. What we can take from this is that authenticity will be perceived through a different set of criteria. For the religious user, authenticity is simply what they understand to be a part of their own religious practice. Whether or not they consider the mediation of ritual to be qualitatively different if this mediation is performed through a computational agent (rather than a fixed text or even a priest) is a matter for themselves.

Religious authority is in many ways as nebulous an idea as that of authenticity. In his classic definition, Weber (1947) suggests authority arises from sacred traditions, appointment to office, or through divine or supernatural powers. Campbell (2007) identifies four layers of religious authority: hierarchy, structure, ideology and texts. What is really unarguable is that authority is performative, discursive and highly contextual (Cheong 2012a). Authority, much like authenticity, must be understood as vested, constructed and multidimensional. Technology is realigning relations in all aspects of the social world, and religion is no different. The ability of networks to undermine traditional hierarchical power structures is well known and uncontroversial. Turner (2007, p118) has stated that technology and associated cultures “undermine traditional forms of authority because they expand connected modes of communication”. This is certainly true, but the case of confessional apps suggests that it is not the entire equation because we can account for a certain amount of authority coming from the implicit and explicit endorsement by church figures as discussed above. As such, the church certainly appears to have found a way of expanding authority and influence through these platforms. What is certain is that this is an *expansion* of religious practices, and as such there are now new agents to account for in questions of authority. Just as web forum moderators are now in positions of authority to influence and even police discussions of faith, apps have an algorithmic agent that influences the sacrament of confession. The 1983 Code of Canon Law states: ‘A priest alone is the minister of the sacrament of penance’ but this does not hold true when we look at the practices being reported by users of these apps. It is therefore the question of authority that requires us to turn our attention to the silent role of algorithmic agency.

5 Locating the algorithmic

As we have discussed, confession is concerned with an internal examination of conscience and is therefore an *inherently moralistic ritual*. In the following section I want to discuss the significance of this if we remove, replace or combine the human actor (priest). It is my belief that in doing so we are in fact assigning a moral agency to the algorithmic component of these apps. There has recently been some very important work in trying to interrogate the role that algorithmic agents have in contemporary life that combines fields of philosophy, science and technology studies, and sociology. Tarleton Gillespie has argued for an account of what he terms 'social relevance algorithms' (2014, p171); David Berry has written a thesis on 'The Philosophy of Software' (2012); and Mathew Fuller makes the argument that we need to capture the 'conditions of possibility' that software establishes (2008, p1). What makes thinkers like Fuller, Gillespie and Berry so important is a consideration of software/algorithms/code respectively as material agents embedded in everyday life. We cannot understand the algorithmic divorced of the nature by which it is encountered. Computer code engenders a 'structure of feelings' by way of its integration into everyday life. David Berry gives us the term 'software avidities', adopted from biochemistry, to capture the intangible accumulative features of qualitative feelings and experiences brought about through or via software (2011, p6). The ontology of an algorithm is defined by its context, and it is this that I will try and unpack now.

Generally, networked software encourages a world predicated on personalisation and feedback mechanisms that bind human and non-human agents into new aggregates. This type of software is part of the growth in quantification and instant gratification that ubiquitous connectivity brings. There is now an immediacy to our social worlds that is having a material impact on our spiritual worlds, and it appears odd that questions of faith, penance, sin and morality would necessarily benefit from quantification, acceleration, and automation. These are, by very definition, aspects of the human condition that benefit from personal contemplation. When it concerns matters of faith, we cannot therefore see these systems as neutral. Every computer, smartphone, app and piece of software mediates our relationship with the world and therefore our relationships too. Rituals of faith are about setting apart: time, space etc. for conscious engagement with the sacred (Helland 2013). This process is at once the description and constitution of the sacred, and by its very definition sits in contrast with the profane and mundane. So in many ways the issue is not the artefact. The issue lies in the uncritical adoption of these platforms, and the ease with which these technologies have been domesticated into our everyday lives. As Silverstone (1994) observed, technology literally enter our homes (and increasingly become embedded in the human body, little more than a few threads of cotton from our skin at all times) and in doing so become imbued with additional meanings. A 'double articulation' occurs; as tools for conveying meaning and as

meaningful things in their own right. Mobile applications like *Confession* or *Mea Culpa* are experienced through a sleek graphic User Interface (GUI), projected through the crisp screens of our smartphones in little more than a reflexive click or swipe. We no longer have to ‘go to’ participate. By simply ‘being’ we are also ‘doing’. This may be useful for managing the household bills or responding to emails, but should our spiritual practices be so conjoined with the everyday?

Confession explains that it is a “Custom examination of Conscience based upon age, sex, and vocation (single, married, priest, or religious)” (little iApps 2016). Due to matters of intellectual copy write it is far from clear exactly how the algorithm might tailor the ritual to individual users. However, we can observe how personalisation manifests through the list of potential sins available for the penitent to choose. Figures 2 and 3 show comparative returns for the user profiles of 16 year old female and a 42 year old male on *Confession*, and there is a striking difference. Similarly, a child will not have a detailed list of sins relating to the Ten Commandments but instead sins are split simply between ‘responsibilities to other’ and ‘responsibilities to God’.

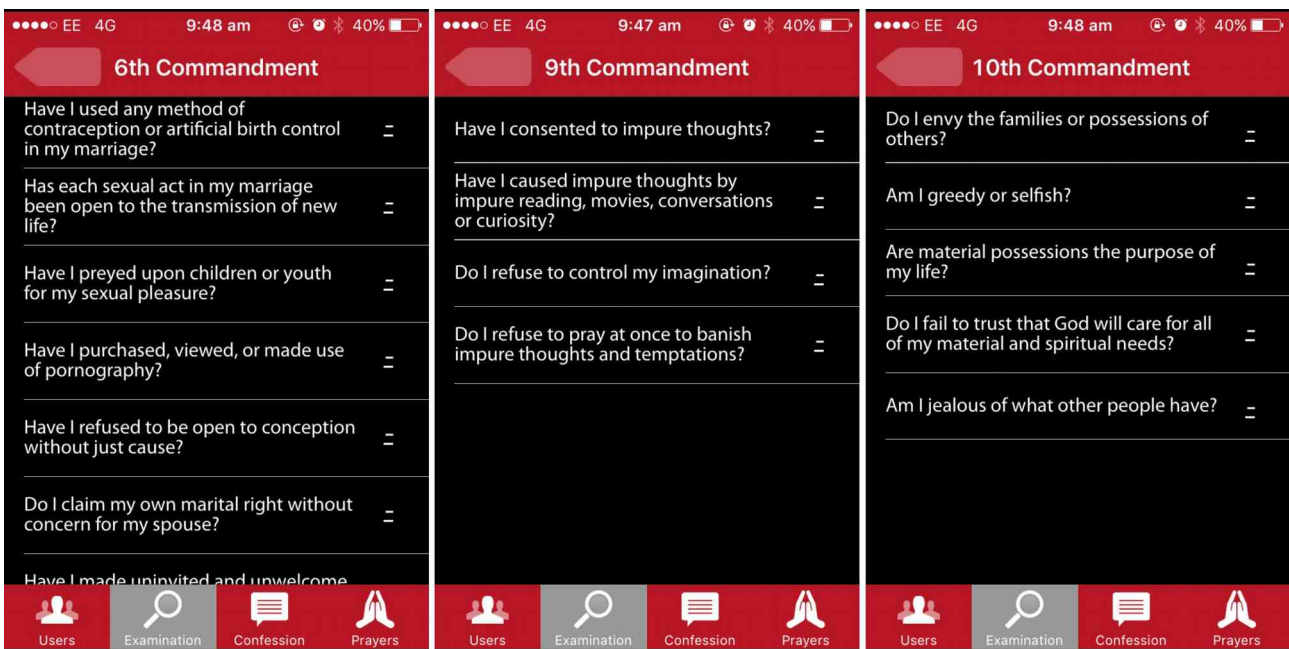


Figure 2: Potential sins generated by *Confession* for the profile of a 42 year old married male

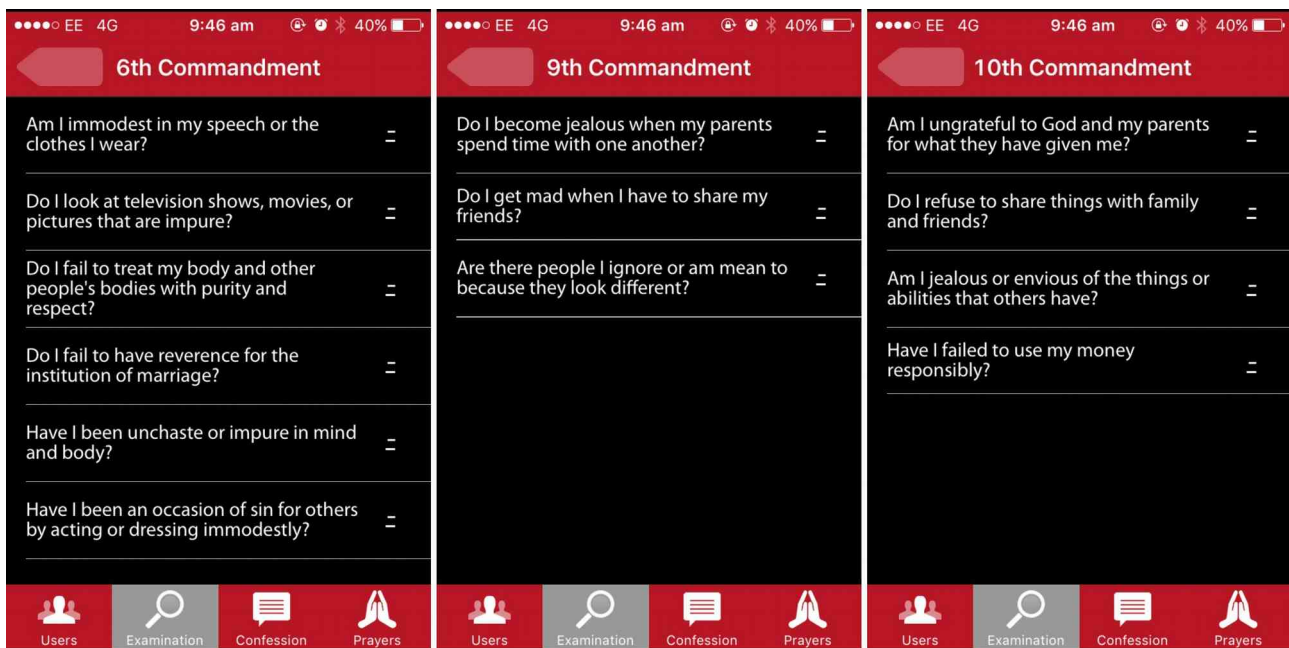


Figure 3: Potential sins generated by Confession for the profile of a 16 year old single female.

We must remember that code is developed to order, and there is general understanding that ethical decisions should be left by designers for users (Kraemer, van Overveld & Peterson, 2011). The code writers for *Confession* would very likely never have entered into the philosophical consideration of their tasks – who would when undertaking 'just another job' at work? Most would not be aware of the final product they were working on. Microsoft Office 2013 contains approximately 45 million lines of code; Google Chrome between 5-7 million; the software in a pacemaker approximately 80,000 (MacCandless 2015) The average iPhone app contains just 40,000 lines of code and is therefore a much simpler object, but still that is an incredible amount of information which is almost impossible for one developer to consider for all its potential and abstract implications. There is never a 'right' or 'wrong' way to write code. Much like the practice of medicine – seen as a hard science but fundamentally an interpretive practice with no single answer to most problems – every programmer will tackle a development task in a slightly different way. How an algorithm is designed to process data has profound implications for the way it behaves as a social agent. For example, if the first question a filtering mechanism asks the dataset concerns age, gender or race, this can have serious ramifications for everything that follows, defining inclusion, relevance and prominence and accessibility. We are all complicit in assuming we live in world of algorithmic objectivity and impartiality, but this is a comforting construct subconsciously deployed as a defence mechanism, and allows us to defer engagement with the difficult questions. Think for example on the case of automated cars: faced with the choice of driving into a crowd of

pedestrians to save the owner's life from an imminent collision, who decides? Is it a choice in 'user settings'; a design level decision inaccessible to the end user; or do we let the algorithm decide the merits of each case as it instantaneously assesses the situation? These are not innocuous questions.

Platforms such as *Confession* are tested by developers for usability, but the individual application is driven by the data input of the user. Consider the observation by Lev Manovich that "together, data structures and algorithms are the two halves of the ontology of the world according to a computer" (1999, 84). Hardware and software are essentially meaningless machines until they have data to process. We must stop and reflect on this in the computational sense: our input is a unique and fluid dataset that is slowly being entered into the computer for it to process. It is a body of data being put through a set of computational procedures, and the only practical different to a static dataset is that information is processed incrementally. The data input here has two categories: first, what we consider 'traditional' demographic data, entered into the app when setting up a user profile. So age, gender, race, marital status, geographic location etc. The second class of data is a sub-set of what Richard Rogers terms the 'post-demographic' (data of the digital realm: our actions, preferences, emotions, connections, etc.). In the confessional apps, this data is constituted by the moral deviations of the user: our individual and evolving catalogue of sins, recorded in perpetuity, and reduced to a series of zeros and ones. An algorithm, at its most basic, functions as *data-question-process-return*. If the input data is neutral, we can assume the return will be neutral. If the input data is moral, *by definition* the process return will have moral implications. Take Kranzberg's first law of technology (1986) 'Technology is neither good nor is it bad; nor is it neutral'.

This is *vital* when we consider religious apps that return a set of instructions or advice. If an algorithm is telling you to do something that concerns matters of faith and morality, we must be able to ask how and why it is producing that particular set of instructions: is it a generic return? Is it selected from a list of pre-sets? Is it random or is it tailored? During the ritual of confession we presume the priest (we maintain the illusion at least) will be drawing upon a lifetime's worth of seminary training, his rich personal knowledge of scripture, the teachings of his own denomination and the application of his own moral reckoning. What similar resource for the algorithm driving *Mea Culpa*? Does *Confession* search scripture for relevant teachings on the topic of a particular sin? Does *Confession* run on a learning algorithm that will build its knowledge of different transgressions over time? Does *Confession* remember our previous sins and decide on an appropriate penance accordingly? Is absolution based on context and relativity, or is it a 'one size fits all' return mechanism? If two users confess the same sin, do they receive the same advise? If the two users commit the same sin yet communicate it in different ways (i.e. as an additional sin not selected from a drop-down menu) do they get the same response? In short, *how clever* is the algorithm driving results? How relevant is the individual user to the response produced by the algorithm? As Kraemer et al. (2011) explain, these questions reflect the basic 'value judgments' that

algorithms are constantly making. As such, no matter how uncomfortable it may be, the design principles of an algorithm thereby contain an implicit or explicit ethical dimension.

In theological terms a priest acts *in persona Christi* – in the person of Christ – during the Sacrament of Penance. The priest receives from the church the power of judgement over the penitent, as a direct bridge between man and God. This is Van Gennep's *transitional phase* of liminal space, representing nothing less than the power to reassign meaning (1960[1906]). It constitutes “an actual passing through the threshold that marks the boundary between two phases” (Szakolczai, 2009): the sinner transformed into the absolved; he that is separated from God by his sin becomes he who is reconciled with God through the removal of sin. No matter how they are marketed, people are using these apps in a way that replaces the priest with a computer programme, and assigns the transitive authority of ritual to a binary processing algorithm.

6 Conclusion

Having performed sacrament using *The Confession App*, there appears on screen a button titled ‘Erase My Sins’. Once pushed, the user is rewarded with the notification ‘Your sins have been erased’. It is a seductively simple route to absolution but through the lens of objective reasoning it is difficult to conclude it has any genuine significance. Yet users repeatedly and consistently report the meaningful, positive and affirming experience of exactly such behaviour. I have focused on Catholic confessional apps in this article, but a quick browse of iTunes or the GooglePlay stores is all it takes to see religious apps designed for all and any aspect of faith and ritual. These apps are adopted and embedded in the everyday with an unquestioning ease by users. As such, it is a particular form of cultural capital to be able to engage and reflect upon these algorithmic agents as material forces informing experiences of faith. As software has evolved and GUIs become ever more seductively designed, customisable, intuitive, and quick, the computational structures withdraw from view, both literally and figuratively. No more clunky toolbars, sub-menus and option screens, so we forget that they run on internal ‘tools’; no more ‘loading’ icons, so we do not have to engage with the fact we are waiting for a system to process data input and a set of command functions to be enacted. Yet the algorithm is there nonetheless, informing the structure, form and content of the confessional. I have argued here that since users report authentic experience through the use of these apps we must take them to be so and instead questions of authority should take precedence. The replacement of the priest with an automated tool has a myriad of implications for how we understand religious authority in the ritual of confession. I contend that because these algorithms are processing data derived from the personal moral deviations of the user, the return

they produce contains an inherently moral component. Whilst these specific applications are – computationally speaking – relatively basic, they represent a much wider trend in which algorithms are now located in the moral and ethical dimensions of everyday life.

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Biography

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