Videogames as a Political Medium: The Case of *Mass Effect* and the Gendered Gaming Scene of Dissensus

Leandro Augusto Borges Lima

Abstract
Videogames scholars rarely engage with concepts from political sciences to explain the presence of political themes such as gender within the medium. In this chapter, I intend to fill this gap and argue how videogames are “political”, supported by an analysis of the videogame trilogy *Mass Effect* and interviews conducted with ME players in Brazil. I argue that videogames are often part of “scenes of dissensus” regarding societal debates, based in Jacques Rancière conceptualization of politics as defiant of the consensus created by the police order. In the first part, I will argue that videogames are political in three axes: production, content and consumption. At the production level, videogame politics of production are correlated to a shift in the industry after the crash of the 80s. The content axis derives from production choices and discusses the prevalence of physical and symbolic violence narratives. The consumption level unveils the dynamics of production and consumption as they affect gamers’ experience of play and everyday political conversation. The second part of this chapter discusses a particular dimension of the political, namely gender. The discussion focuses on the core elements of this scene of dissensus within videogames, from its brief gendered history to the three phases of gender research in videogames (Richard, 2013) and its main points of contention. The third part of this chapter focuses on a case study to clarify the dissensus and the “political” within the boundaries of gendered gaming using the trilogy *Mass Effect* as a case in study. The analysis follows two axes: production-content, discussing game mechanics and in-game representation of female characters, and content-consumption, discussing the perceptions of gamers regarding *Mass Effect* gendered content in relation to their wider knowledge of videogames culture and informed by their personal experiences as gendered beings.

Keywords Videogames, Scene Of Dissensus, Gender, Mass Effect
1. Introduction

Defining politics is a complicated task: as Heywood (2013: 2) argues, the term is “loaded” with several understandings of what politics stands for circulating in society. Heywood argues that politics as an “arena” and as a “process” are the two main broad approaches in political research. The former is a research approach that refers to a “place” where we study the “science of government” and other public affairs that are situated in a confined, institutionalized space. The latter is concerned with the dynamics of political action within virtually endless spaces in society (ibid.: 2-3). The concept of politics that is adopted here is grounded in Rancière’s distinction between the police order and politics as a dynamic of dissensus. It is concerned, firstly, with politics as a “process”. Nonetheless, Rancière’s conceptualization of politics does not refuse the importance of institutionalized arenas and “formal” state politics, as they are also places of dissensus.

In Ten theses on politics (Rancière and Corcoran, 2010), Rancière’s core argument is based on the opposition to politics that is seen as conditioned by power. Rancière criticizes the idea that politics is about those in power and argues that the “without part” is essential for politics to exist. Politics is, therefore, not about specific power struggles, nor is it a simple opposition of ideologies and goals, but it is “an opposition between logics that count the parties and parts of the community in different ways” (ibid.: 35). The “police order” and “politics” are the labels Rancière uses to refer to these opposing logics. Their discrepancies appear through the “distribution of the sensible” (Rancière, 2004). For the police order, the distribution imposes norms and rules onto the bodies, dictating how groups and individuals should behave and act in society. The police order is not “a social function”. It is neither an institution nor a state apparatus of repression, but rather a “symbolic constitution of the social”. Politics, then, is the disruption of this constitution that happens through the partaking of the “without part” in society.

Democracy, he argues, is “the very institution of politics itself” (Rancière and Corcoran, 2010: 31) as it is played out in the tension between the police order and the voice of those “without part”, the demos, or those “who speaks when he is not to speak […] the one who partakes in what he has no part in” (ibid.). The tension manifests itself as a dissensus, not as a dualist conflict, but as a “gap in the sensible itself” (ibid.: 38) often lived by the “without part”. Rancière’s work demonstrates simultaneously the imbalances of who retains the right to speak within society and the subtle forms through which the unheard deal with the police consensus.

---

1 The “without part” are those groups and individuals outside the sphere of visibility in society. Minority groups, such as women and LGBTQA+, for instance, are considered “without part” in this definition as they remain at the margins of society while struggling to be heard and seen, of practicing politics as political beings.
Rancière understands the imbalance as not just a matter of power, but also as a consensual establishment of societal roles. This chapter focuses on a particular societal realm outside institutionalized politics, namely videogames, raising the question whether, and in particular how, videogames are political. Taking Rancière’s theoretical framework as a starting point, this chapter will first explore the academic literature on the political aspects of videogames in general, using three axes – production, content and consumption. A second part will zoom in on (the literature on) the gendered scene of dissensus within videogames culture. Lastly, a case study on the videogame Mass Effect is used to illustrate the gender politics of videogames.

2. Videogames and politics

If we understand politics as a scene of dissensus that stretches beyond the realm of institutional state politics, how do videogames fit in this scenario? Videogame’s political potential appears, for example, in its content and through its correlation with other cultural products. It is also present in how certain production values work in the development sphere. The effort towards reframing the medium discourse, from an entertainment-only device to one that allows serious issues to be raised, manifests this potential. Recently the games industry started to explore more possibilities in independent yet successful games such as This War of Mine and Papers, Please – both having the “unseen”, the “without part”, as key characters in the debate of warfare consequences for the population, in the case of the former, and immigration policies, in the case of the latter. I present these political dynamics within videogames culture using three axes: production, content and consumption.

Starting with the production axis, we can say that videogames are produced by a “mass entertainment” industry grounded in ICT developments. Production costs are high, as they demand specialized expertise and expensive machinery. This is especially true for the industry of “Triple A” games – akin to blockbusters in cinema. The demand for profit adds another layer of cost to the equation: a “Triple A” game must be able to return on investment and, simultaneously, consider the generation of extra funds for new projects. Even if its history is recent, videogames,

2 Although data on the overall sales of the game are difficult to gather, the developers, 11 Bit Studios, affirm that in only two days from its release the game already paid itself through its sales. According to data from SteamSpy, This War of Mine has sold, up to the 4th of October 2016, 1.413.904 copies.

3 Papers, Please, released on 2013, sold 1.521.053 copies on Steam, but it is also available as an iOS app, therefore its sales figures might be higher.
as an industry, went through a severe crisis during the 80s. After a blooming start as a new industry, the crash of the 80s became a turning point and almost ended videogames at the time (Wolf, 2008: 103-106). However, the rebranding of videogames by Nintendo, defining it as a toy, caused the industry to breathe once again.

Ultimately, the crash defined the politics of production: videogames became a certain type of content, developed with a certain demographic in mind, defined through marketing research, in order to create faithful consumers that wished for well-defined content crafted for them. The political in the production axis manifests itself in at least two aspects: the first is the politics within the developers’ teams, related to its organizational hierarchies (Kerr, 2006; Kline et al., 2003) and power struggles (Dyer-Witherford and De Peuter, 2009), but also to its mere composition. For instance, development teams are mainly comprised of white men: the International Game Developers Association report informs that more than three quarters of developers identify themselves as Caucasian males (Weststar and Andrei-Gedja, 2015: 9). The remaining quarter is populated by Asians and Latinos, with African and African Americans constituting only 2.5% of the workforce. Secondly, the politics of production affect the decision-making processes regarding the production and release of certain games over others: which videogames will be sold to the carefully constructed audience, how much potential profit will be made from that title and so on (Kerr, 2006). These considerations affect, for instance, the content of the videogames that prevail in the industry. Focusing on a young-male demographic from the start, Nintendo and other companies decided on developing certain kinds of games that became their golden pots.

Content also matters in this discussion, which brings us to the second axis. During the early days of videogames, technology did not allow a great variety in mechanics and narratives. However, videogames rule-based system and military origins have made it, from the start, a source of competition (Pong) and violent conflict (Spacewar!). Where the first is often seen as an interesting and healthy aspect of videogames, the second has been widely debated in academia by scholars working on media effects and media psychology (Anderson et al., 2010; Ferguson et al., 2008), but it is also a common theme in other media. Violence in videogames has triggered a key and society-wide political debate, which is, by now, contested within videogames themselves. Undertale (2015), for example, proposes a discussion on the use of violence as problem-solver in videogames. It is possible to spend most of the game without engaging in violent action against other players, solving almost everything through dialogue – except for the final boss fight where you need to use violence, a shift constructed narratively through the gameplay until the fighting moment.

Of course, not all games rely on physical violence to motivate gameplay, but they might still rely on a more surreptitious form of violence, at the level of the symbolic, which often reinforces several hegemonic ideologies. Symbolic
violence is persistent in videogames, for instance, in the way how certain demographics and minorities are represented, both in terms of graphics and narrative roles. Leonard (2006), for instance, focuses on racism and on the biased portrayal of African and Middle-Eastern males as enemies doomed to be defeated by a stereotypical male hero. Shaw (2014) studies LBTQA+ players at the “margins” of gaming and argues that representations in videogames are not harmless, as they are part of a broader social and media context where discourses of oppression are constantly reinforced (Shaw, 2014: 2).

The political choices of production are oriented towards what is expected in terms of content, and who is going to consume the said content. This brings us to the third axis: consumption. With varying degrees, from the apparently innocent *Super Mario* to more aggressive games (at both the physical and symbolic level), such as *Grand Theft Auto*, developers have, more often than not, privileged violence-based mechanics, white-male protagonists and the use of elements that speak to male culture overall. However, these production processes and the resulting content do not undermine the participation of the “without part” in videogame culture. Despite the focus on the hardcore male gamer as their primary target audience, secondary audiences come in scope once a videogame has been established, as Kerr (2006: 100) points out. Therefore, it is safe to assume that the videogames audience is considerably diverse – even though said diversity lacks (political) representation, and the without part have trouble making their voices heard within videogame culture. For instance, several studies on sexuality and gaming demonstrate the presence and importance of LBTQA+ communities within the videogames culture. Their focus is not only on in-game representation (Shaw and Friesem, 2016; Johnson, 2013) and identification (Shaw, 2014), but also on the use of videogames as a place to perform one’s own sexual identity, especially in massive multiplayer online role-playing games (Pulos, 2013; Sherlock, 2013), or as a space for LBTQA+ political activism (Goulart, Hennigen and Nardi, 2015).

What further complicates this constellation is that, as a medium, videogames are also cultural tokens, “*talk-about-able objects […] in public conversations about broader societal issues*” (Steinkuehler, 2006: 100). Therefore, the axis of consumption as proposed here is less concerned with who consumes and why, and more with how said consumption is converted into tokens for everyday political conversation (Gamson, 1992), which adds other aspects of one’s experience to this consumption. Gamson’s (1992) study found that people bring to the forefront of political conversation arguments from personal experience, common sense and knowledge of peers, making them clash with what they heard from media discourses. Videogames, as a contemporary player in the media ecology, become part of an individual argumentative repertoire. They add to everyday political conversations when they appear in media discourses, in cases like Columbine, with discussions about the media effects
of violence, or in the case of the 2007 controversy regarding *Mass Effect*’s sex scenes (which were depicted in a Fox news item in the US). They inform long discussions on online forums such as Reddit or in the comments section of news, especially in relation to a “gendered scene of dissensus” that is highly controversial within videogames culture. Moreover, they affect how gamers experience videogames: having their own identities reflected on screen not only provides personal motivations to play, but opens up possibilities of a political shift within the videogames industry.

3.  A gendered scene of dissensus

A key theme in political discussion within videogame culture is gender. In this section, I zoom in on this aspect, in order to trace the core elements of this scene of dissensus, starting from its brief gendered history, discussing the three phases of gender research in videogames (Richard, 2013) and its main points of contention. Despite the Atari era marketing (claiming that videogames were “for everyone”), the industry crash during the early 80s was a turning point regarding gender (Lien, 2013; Wolf, 2008). In order to rise again, as a desired product of consumption, the Japanese company Nintendo rebranded videogames as a toy, predominantly focusing on a boy demographic, as the company’s research pointed to them as the main consumers of technology. Thornham (2008: 132) argues that the persistent perception of videogame practice as a “boy thing” potentially affected women’s adherence to gaming, as they were not expected to play videogames after childhood years.

After the shift towards boys as the initial target audience of videogames, initiated by Nintendo, the female presence within videogames culture became secondary. The marketing discourse no longer defined them as a target, and female in-game representations became more sexualized. A study on videogame covers by Burgess et al. (2007: 427) discusses the prevalence of male characters in the spotlight, while female characters, if/when present, take a subordinate position on the cover. Videogame reviews, both online and in print, also favored the discussion and representation of the male characters, while using hypersexualized female imagery as eye-catchers, as Ivory (2006) and Fisher (2015) argue. Initiatives such as the “pink games” by Brenda Laurel in the 90s, in order to create games oriented to girls, proved that there was a female public interested in gaming, but the stereotypically gendered nature of the games produced within the movement did little to improve matters of representation and inclusion. Laurel’s initiative coincides with the first comprehensive publication about gender and videogames. According to Richard (2013: 270), the first wave of gender and games research studied differences in relation to the experience of play and gender. In the process, gender stereotypes prevalent in society became replicated. The second wave, marked by Cassell and Jenkins’ (1998) publication
and its “sequel” by Kafai et al. (2008), tackles this critical issue within the first wave and includes a broader social and cultural context to gaming experiences, moving beyond stereotypes (Richard, 2013: 272). The third and current wave is intersectional, where different aspects of one’s identity, for example, are taken into account to analyze videogame production, content and consumption. In doing so, the third wave moves from a “gender study” of videogames to a broader discussion of gender, queer and feminist theories applied to gaming practices (Richard, 2013: 278).

The theme of in-game representations, in terms of character design and storytelling, spans the three waves as the main debate regarding gender. One of the core arguments in this debate, as it is raised by Williams et al. (2009), is the relationship between the dominant male character representation in videogames and the lack of women developers in the industry. They argue that videogame creation relies on the self-identification of developers with the in-game characters, leading to a gender imbalance in the industry (Williams et al. 2009: 828-830). Their findings support Williams’ (2006) previous study, in which he argues that a male-centered circuit of videogames development led to lack of diversity in games content. Recent results of the 2015 International Game Developers Association (IGDA) report shows that a wide gap between male and female developers still exists (Weststar and Andrei-Gedja, 2015).

These claims about a causal relationship are, of course, not the only explanations for the lack of in-game gender diversity. For instance, Anthropy’s (2012) manifesto argues that the main path towards a “real” change in videogames content is not workforce diversity in the development studios, but the popularization of game-making technologies so that potentially everyone could develop their own games mirroring their own experiences and identities. Flanagan and Nissembaum (2014) still defend the change within the professional industry and propose a “value-based” design system that teaches videogame developers, independently of their identity, to create inclusive and respectful games. Shaw’s (2014) work demonstrates that, to a certain extent, these different debates and their proposed solutions regarding content are not sufficient to understand the issue of representation and identification. Her study with several gamers at the margins of gaming – the “without part” – argues that identifying with a character, or having an interesting experience of play, does not have to constitute – and often does not, according to her interviewees – a direct relationship between one’s own identity and a character’s identity. Her study defies common assumptions of representation automatically leading to identification, arguing that representing minorities, due to “quota” or to social pressure, does not always amount to a fair representation of minority issues.

4 According to the report, self-identified female developer comprises 22% of the demographics of game industry, while 76% self-identified as male.
4. Mass Effect and gendered gaming

The last part of the chapter illustrates the discussion above and demonstrates how the political dynamics of production, content and consumption apply to the development and playing of a particular videogame, namely the Mass Effect trilogy. The analysis is based on ten interviews with Brazilian players from two cities, Belo Horizonte and Rio de Janeiro, and on a videogames content analysis. The interviewees were selected keeping diversity regarding gender and sexuality in mind, in order to encompass the different experiences of life and play. The analysis used a narrative method approach (Somers, 1994) to extract from each interviewee their stories and experiences, and how they related to broader socio-political contexts and a gendered scene of dissensus. The narrative approach is, according to Somers (1994), a means to “make sense of the social world” and “constitute our social identities” (ibid.: 606). There is a move, she argues, from a representational narrative approach to a social epistemology and ontology approach which allows the researcher to engage with “historically and empirically based research into social action and social agency that is at once temporal, relational, and cultural, as well as institutional, material, and macro-structural” (ibid.: 607). The case study of Mass Effect has two components, the production-content axis and the content-consumption axis, to look at the representations of the female characters and the gamers experience with gendered play.

Mass Effect story is set in a futuristic sci-fi scenario where humanity belongs to a complex galaxy-wide society populated by several species. The trilogy, which started in 2007, achieved great success among gaming communities, creating a considerable fan-base in constant interaction, debating the game and creating material based on its lore. As highlighted by Williams et al. (2009: 823), videogames research often shy away from studying the games that are indeed played by a massive quantity of gamer public. Analysing Mass Effect, a bestselling and award-winning game, can reveal different facets of videogames culture when it comes to exploring gender politics.

4.1. Production-content axis

As previously argued, the politics of production can become intimately connected with which kind of content will appear in a game. In the case of Mass Effect, a high budget “Triple A” game, production decisions regarding gender are of particular interest. The game is developed by Bioware, a company reckoned among gamers by its good reputation on listening the fan-base and fostering dialogue with them in order to “further improve the quality of the game components on which the studio
built its reputation” (Heineman, 2015: 2). Mass Effect lead developer Casey Hudson says that Bioware’s games intend to tackle gamer emotions through their identification with the game’s characters, which turns this into an “informal” company police rather than just a neutral matter of content creation (Heineman, 2015: 6).

To achieve this objective, a set of diverse characters is needed and has been delivered, to a certain extent, throughout the trilogy. The first step was a customizable main character when it comes to gender and sexuality. Unlike several other RPG’s, where such change matters little in terms of gameplay and game content, Mass Effect’s emotionally engaging narrative does add flavor to this choice, moving beyond the pure game mechanics. Hudson values the possibility that players were given, as he believes games “can allow you to explore how you feel […] but also about how you might do things that you can’t do in real life (e.g., to role-play a character of a different gender)” (Heineman, 2015: 6). For some of my interviewees, in particular for the female interviewees, customizable characters are deemed necessary, as they allow the player to digitally perform their own identities. It is seen as an important move towards content diversity.

In a critique of how Mass Effect naturalizes too many matters of gender and sexuality, Angelina states, however, that these issues do not hinder the game’s qualities and her gaming experience. As a bisexual/asexual woman, she claims that her own identity “influenced (my) way of playing any game”. She favors Role Playing Games in her gaming choices. My male interviewees would often play as woman too, and experience this gender performance, at least, to an extent. Chester’s reaction to his choice to perform a lesbian female is interesting as he admits to himself that he falls into a stereotypical erotization of female homosexuality when doing so. On the other hand, Ron, a gay male, argued that, grounded in his identity, he desires to play as a female and lesbian character because the game allows him to.

Regarding design decisions, however, the game still relies on common tropes in relation to gender imageries. Jeremiah, an enthusiast fan of the female character Jack, a powerful biotic with a very interesting back-story and development, is critical about her design, as she “wears a suit that covers 0.5% of her body and you can question if that is really needed”. Jack’s design is also an issue for Robin, who considers it to be “awkward” and “very sexualized”, considering that “she was in prison; it (the clothes) has a bad tone”. Alice also points Jack’s lack of clothes as an issue, but understands that her tattooed body is “a clothing” in itself that aligns with character personality.

Interviewees often considered the representation of female bodies a major problem in a game that is still perceived as “progressive” regarding gendered representations. Rahna referred to a Mass Effect art book during the interview, outraged by the design options available to different female characters concluding that the final choice “could be worse”. She questions why the different designs
for women are variations on how to better portray cleavage, while male characters such as Garrus have several designs of his battle scars and “bad ass” looks – a typical male trope of militarized bodies.

4.2. **Content-consumption axis**

The consumption axis, as it is utilized here, is concerned with the relationship between videogame play and gamers use of its content as argumentative tokens to discuss gender issues. Considering videogames as part of a gendered scene of dissensus allows us to understand the role that the medium plays in reinforcing dominant gender discourses. Videogames have a usual preset of protagonists that Robin, a transgender male, described as the “40-year-old bearded man that lost his family” trope and several variations of unlikely heroes that are always male. In this regard, *Mass Effect* brings to the scene a series of contradictions. The representation of female characters sparks mixed feelings: Rahna believes that the sexualization of women in any game, in order to please men, is unnecessary and meaningless, but *Mass Effect* is still able to create interesting female characters that “are sexualized, but strong, they have a history behind them”. This does not ignore, however, the existence of broader problems within gaming, where, she says, “there is still a lot of resistance, a lot of people doing stupid stuff, a lot of women being harassed in online games”. Videogames are simultaneously a site of consensus – with defined (yet implicit) rules about who can/should play, which forms of bodies are/should be represented – and a site of dissensus, as “the police order” expectations are often challenged by the “without part” who wish to create a welcoming space for themselves within videogames culture.

Videogames as tokens for political debate about gender are an important tool of self-affirmation for the female demographic. My female interviewees had a similar discourse of wanting to feel represented, arguing that this debate should go beyond the gamer community itself, as it could potentially bring in new players. Representation, as Angelina says, is very important for minorities in gaming:

And this (diversity in Mass Effect) influences my gameplay a lot because I need this representation I don’t even say in regard of “MY” bisexuality, but of the no-heterosexuality. […] It influences a lot, primarily if there are characters openly non-white or non-heterosexual. You fell more... attracted to (have) a relationship, of any sort, with those characters. I think it is important, necessary, and it’s past the time for this (diversity in games) to happen.

Male interviewees, in contrast, present a discourse of relative support to diversity – that representation is needed – but a character being men or women does
not matter much to them when playing. Some prefer to focus on the mechanics, instead of “forced romances and dialogues” that feel “unnatural” to them. This discourse is in tandem with societal discourses of media representation where those who are overly represented do not seem to grasp the urge of minority groups to be represented. For Jeremiah, however, videogames tackling the gendered disensus cannot be stopped, as this would imply a regression that “does not fit videogames as a medium anymore”. He highlights that the gamer public is “not only politically conservative, but also conservative on understanding what is a videogame”, seeing it as just entertainment and refusing their “socio-political aspects (because) they think it is a perversion of the essence of videogames”.

5. Conclusion

This brief analysis of *Mass Effect*’s production, content and consumption allows a dialogue with Shaw (2014) findings, to an extent. My interviewees tend to adopt a political stance that in-game representation is necessary, and, for them, it also leads to identification. Their position conflicts with those demonstrated by Shaw’s study, where her interviewees state that a character “could be a bunny for all I care” (Shaw, 2014: 98) and perceive character development in terms of narrative to be the primary factor regarding representation/identification. *Mass Effect* is a game that promises to deliver both in-game representation of minorities, compelling character development, and opportunities for the players to identify with diverse characters. If Bioware still fails on delivering less stereotypical representations of female imagery in terms of design, they seem to be able to provide a set of strong characters from both genders that appeal to gamers.

The interviewees perceive the matter of being represented, or not, on screen as a political matter, which is related to the evolution of videogames medium and their consumers. From a simple graphical representation that is fair and non-sexualized to the development of strong female characters that rupture expected stereotypes, videogames can be key tools for diversity politics. The responses from my interviewees also demonstrate how their perception of these matters goes beyond a single game. Shaw states that games researchers should look beyond the text, and I want to add that games researchers should look beyond the ludic form of gaming, in order to understand the importance of representation and identification, because “subjective reasons for play and personal preferences” (Shaw, 2014: 109) play a major role in one’s experience with a videogame. My interviewees built on their own experiences with videogame culture in general to discuss the issue of gendered disensus in videogames: *Mass Effect* is simply a starting point for their arguments.
Within videogame culture, the “without part” are struggling to rupture the “videogames police consensus” regarding women, in the three axis of production, content and consumption. My differentiated set of interviewees allows me to see some of these conflictual positions within the realm of consensus and the constant push for dissent. My female and transgender interviewees use a more political discourse regarding issues that affect them directly, while the male interviewees barely comment on the issue, unless provoked to do so, with the exception of Jeremiah, who assumes to have been subjected to good influences from his friends (and from videogames), changing his world views. To which extent videogames’ role on the gendered scene of dissensus can lead to society-wide improvements remains to be seen, but the current changes within the videogames scene demonstrate that the gamers and the industry may have started, in this “scene of dissensus”, to slowly rupture the police order consensus about gendered gaming.

References
Gouart, L., Hennigen, I., Nardi, H. (2015) “‘We’re gay, we play, we’re here to stay’”: notes about a LGBTQ pride parade in World of Warcraft’, Contemporânea – Comunicação e Cultura, 13(2): 401-416.


Ludography

11 Bit Studios. This War of Mine. 11 Bit Studios, Deep Silver.


BioWare, Demiurge Studios, Edge of Reality. Mass Effect. Microsoft Game Studios, Electronic Arts. 2007.


Biography

Leandro Augusto Borges Lima is a PhD candidate at King’s College London, Department of Culture, Media and Creative Industries. My research explores the uses of videogame as a medium for political conversation, focusing on matters of gender and sexuality, through a case study of the game Mass Effect.

Email: leandro_augusto.borges_lima@kcl.ac.uk