The peer, a member of Finchley United Synagogue in north London, has spoken about the importance of Orthodox women in leadership. But she said that as a minister she had been "micro-controlled".

"I can do more good from the outside because I won't be silenced anymore," she added.

The 60-year-old said she had been frustrated by the government press office's attitude to the media. As the former director-general of Saga Group, she said she regularly used the media to discuss policy issues.

Baroness Altmann revealed that during her 14 months in government she was "not allowed to speak to the media; it is all done through the press office who often do not understand pensions.

"The instructions I had were: 'If any journalist phones you; then they are always out to trick you and trap you'.

I was not able to explain policy in an open way

"What I found difficult was not being able to explain policy to the media; and thereby to the public in an open and honest way; which is what I have always done."

She added: "Now and again I was very naughty, and I would actually speak to a journalist and take the consequences because I thought: 'Stuff it, I have had enough of this'.

"But then you get called in to see the Secretary of State. It's like being in school, like being in the naughty corner or detention."

Baroness Altmann said that earlier this year she had had a showdown with Downing Street officials dispatched by the prime minister. That came after a positive meeting with him, she said, but did not lead to a change in attitude from others in her department.

When she was appointed by Mr Cameron last year she became one of a number of senior Jewish figures in his administration. She said she was initially optimistic, noting that officials were very supportive of her Orthodox religious requirements, from arranging "departmental cover on Shabbat, to the Jewish holidays, and providing kosher food - we are so lucky to live in a country where a government can be absolutely so completely accepting, tolerant and even welcoming".

Asked whether the culture towards the media might change under the leadership of Theresa May, she said: "I suspect it won't because it's even more important now for the government to be united."

She added: "I have never been a politician and quite frankly, I just don't want to be a politician. It's something that I found quite alien because I am a straight-talking person. I have got to get myself back together again.

"As I said to the Prime Minister, I am not going anywhere. I am still in the Lords and I am still offering to help. I can help as long as legislation goes through, to try and move it in a better direction, lead debates and ask the right questions.

"At least I can say what I think and I am not being silenced in government."

Baroness Altmann's resignation letter:

Dear Theresa,

Congratulations on your appointment as our new Prime Minister and I am so delighted that our country will have the benefit of your wisdom, good sense and experience. I believe you have the qualities most needed – not least your determination to pursue policies in the long term interests of the country as a whole.

I am honoured and grateful to have had the opportunity to serve in Government and look forward to continuing to advise on pensions, finance and later life policies from the House of Lords benches.

As an economist and investment professional who has been involved in all aspects of pensions for nearly 40 years, I am at heart a policy expert, rather than a politician. I have spent my entire career trying to help as many people as possible enjoy better later life incomes, encouraging consumer protection and social justice.

As a Minister, I have tried to drive positive long-term changes on pensions from within Government and ameliorate some of the past mistakes which I have cautioned against. Unfortunately over the past year, short-term political considerations, exacerbated by the EU referendum, have inhibited good policy-making. As the country heads into uncharted waters, I would urge you and your new team to enable my successor to address some of the major policy reforms that are needed to improve pensions for the future.

It is vital that we continue to roll-out the successful auto-enrolment programme to ensure all employers offer pensions to their staff. Regardless of the economic challenges, everyone will need to have some money set aside for later life and pensions are the best way to do so. We must, too, address the crisis in social care funding and help people provide for potential care costs as well. In order to help fund this, we should look to develop a 'one nation' lifetime pension.

A 'one-nation' pension – long overdue reform of pension tax relief: Our present ineffective and complex incentive structure for pension saving costs over £40billion a year. It favours the highest earners disproportionately, while leaving lower earners seriously disadvantaged. We need a radical overhaul of incentives, which can offer more generous help than basic rate tax relief, but as a straightforward Government pension contribution for all, and would end the discrimination against Britain's lowest earners who are forced to pay at least 20 per cent more for their pension than higher paid workers. This 'one nation' pension would see withdrawals taxed in later life, so that people have a behavioural incentive not to spend the money too soon.

A major review of Defined Benefit pension scheme funding and affordability: We must urgently assess the future of our Defined Benefit pension schemes. Given the risks of diverting corporate resources to one favoured group of workers, the need to ensure adequate resources for younger generations' pensions, the time is right to properly consider the issues facing employers trying to support Defined Benefit pension schemes and potential use of pension assets to boost economic growth.

Fair treatment for women and better communication on State Pensions: On the issue of women's state pension age, whilst I respect the democratic decision taken in 2011 by our Parliament, I am not convinced the Government adequately addressed the hardship facing women who have had their state pension age increased at relatively short notice. They were not adequately informed. I also

believe we must devote resource to widely communicating and publicising the coming changes to state pension age for both men and women.

I remain deeply committed to helping our great country make better pensions policy for the British people and to planning ahead for the long-term future of our ageing population. I stand ready to help my successor and to offer my policy expertise. As you set a new course for our country at this very difficult time, I wish you every success.

Yours truly,

Ros Altmann